THE EFFECTS OF THE COVID-19 PANDEMIC ON TEACHER SELF-EFFICACY AMONG ONLINE FACULTY AND RESIDENTIAL FACULTY TRANSITIONED TO ONLINE TEACHING: A CAUSAL-COMPARATIVE STUDY

by

Sheryl Mae Welfel

Liberty University

A Dissertation Presented in Partial Fulfillment

Of the Requirements for the Degree

Doctor of Philosophy

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ABSTRACT

Teacher self-efficacy within the context of a crisis is valuable to study as it impacts the whole of the educational environment. The purpose of this study was to determine if there was a difference in the perception of teacher self-efficacy between instructors who were impacted by the COVID-19 crisis. The importance of this study focused on how faculty members described their teacher self-efficacy while implementing online instruction in emergency remote online teaching situations. The participants for this study were higher education faculty from a university in the eastern region of the United States who taught from 2019 to 2022 which covered the period in which COVID-19 affected both online and residential teaching environments. A minimum sample size of 66 participants answered survey questions from the Teachers Self-Efficacy Scale (TSES) which was distributed to instructors in three independent teaching modalities: online, online and residential, and residential faculty forced to online teaching during COVID-19. The statistical analysis procedure was a one-way analysis of variance (ANOVA) to reveal if there were any statistical differences between the means of the three independent teaching modalities. The results from the data analysis confirmed the null hypothesis could be rejected as there was a statistically significant difference in teacher self-efficacy scores between the taught online and residential modality and the residential faculty forced to online teaching during COVID-19 modality. In conclusion, this study revealed teacher self-efficacy is a concern for instructors during a crisis.

Keywords: online faculty, residential faculty, teacher self-efficacy, online education, transformational change, pedagogy

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Dedication

This research project is dedicated to my husband, Thomas Welfel, and to my family Amanda (Eric), Andrea (Seth), Adair, Adlai, Asher, Anna (Jesse), Austin (Laney), and Asa. I appreciate the support and prayers you provided through yet another research paper.

And to my Lord who answered so many prayers to help me maintain focus. He is my everlasting and continual source of strength and guidance, without whom this journey would not have been possible.

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List of Abbreviations

Analysis of Variance (ANOVA)

Learning Management System (LMS)

Teacher self-efficacy (TSE)

Teacher Self Efficacy Scale (TSES)

Theory of Self-Efficacy (TSE)

Transformative Learning Theory (TLT)

Chapter 1: Introduction

Overview

The purpose of this quantitative causal-comparative study is to determine if there is a difference in teacher self-efficacy scores among instructors who taught only online, instructors who taught online and residentially prior to the pandemic, and instructors who taught only residentially, but were moved to online teaching due to the COVID 19 crisis. Chapter one provides a background for the topic of teacher self-efficacy and the three types of teaching modalities. Included in the background is an overview of the theoretical framework for this study. The problem statement examines the scope of recent literature on this topic. The purpose of this study is followed by the significance of the current study. Finally, the research question is introduced and definitions pertinent to this study are provided.

Background

COVID-19 caused an unplanned and rapid move to online teaching for higher education instructors across the globe. This emergency transition resulted in poor educational experiences for the student and poor teaching strategies for the instructor resulting in sustained growth for the learning institution (Colclasure et al., 2021; Hebert et al., 2022; Li & Lalani, 2020; Sudipta & Covelli, 2021). The abrupt transition to online teaching not only disrupted teaching but caused many students to transition to online learning. This left instructors scrambling to learn a new learning management system (LMS) such as Blackboard or Canvas and rely on new technology with little to no training or preparation. Rapanta et al. (2020) noted the urgent imperative to move online added stress and workloads to instructors who were already struggling to balance teaching, research, service obligations, and family. Ma et al. (2021) reported residential instructors tend to feel less self-efficacious in regard to online teaching without prior online

teaching experiences. Teaching online during the COVID-19 pandemic required the use of technology which is a major factor influencing education today (Winter et al., 2021). Research conducted by Winter et al. (2021) noted many instructors use technology on a regular basis and may have a good level of skill in using a variety of technological teaching programs, but there are still instructors who lack confidence and thus try to avoid using technology for teaching. While lack of prior online teaching could produce low self-efficacy in residential instructors as an effect of the COVID-19 pandemic, having experienced the change, future online transitions might have little to no effect on teacher self-efficacy.

Historical Overview

While distance education can be traced to the 18th century, it has reached new heights within the realm of technology and continues to advance (Kentnor, 2015). Distance education began as correspondence shorthand courses in the 1840s, radio brought educational broadcasting to transmit educational matter in the 1920s, television advanced distance education as visual technology, then finally in the 1980s, the internet was introduced as a new educational delivery mechanism (Kentnor, 2015). Distance education, now referred to as online learning, was based on the premise that education was possible without face-to face interaction (Kentnor, 2015).

Various forms of online teaching have been extensive prior to the pandemic but online teaching became intensified because of the COVID-19 pandemic (Ma et al., 2021). Historically, online teaching has been a slow process with many institutions resisting the change but as the rapid transition occurred, challenges quickly surfaced. Hanson (2021) reported educational institutions faced resistance by the faculty as they were concerned that the use of technology could not maintain the same rigor and content quality found in face-to-face instruction. Additionally, Colclasure et al. (2021) notes, “Less familiarity, infrastructure, and developed

programmatic support with online instruction may have posed additional challenges for predominantly undergraduate institutions to transition to emergency remote teaching," (p. 3).

The advancement of technology has brought new opportunities as well as concerns for educational institutions and instructors. The technological advances of teaching online have brought the need for confident faculty to teach students with whom they have no physical presence. "Technology has forever changed the educational landscape through enriched learning environments; because of this, faculty need tools and resources to help successfully facilitate learning in online educational environments," (Mohr, 2020, p. 123). In 2015, research noted there were over 6 million students taking at least one online course in higher education (Mohr, 2020). As the demands for online education increase, the demands for online instructors have increased as well. Due to this continued growth in distance learning, faculty professional development has become a major focus (Herman & Langridge, 2017).

Social Impact

Current trends in the movement to online education have been identified as approximately 30% of college students are enrolled in at least one online educational course (Colclasure et al., 2021). While the growth of online education has been variable among sizes of higher education institutions with smaller colleges being less aggressive in offering online courses, during COVID-19, higher educational institutions were forced to make the emergency transition to online teaching (Colclasure et al., 2021). With online enrollment increasing in institutions which offer primarily online instruction and institutions which offer mostly residential courses making the adjustment to offer both remote and online course options, faculty professional development will need to take a necessary role in promoting a quality online education (Hanson, 2021). Since school administrators will continue to offer online courses, they

will need to know 64% of college students surveyed had either not taken online courses or had only taken one online course as they plan for future course development (Hanson, 2021). These statistics should further promote the need for residential instructors to be available and trained for online teaching.

In an article published by Friedman (2018), it was noted college student enrollment in online courses rose faster in 2016 compared with the previous three years, indicating students are making educational choices which include online courses. Friedman (2018) also noted more than 6.3 million students took at least one online course in the fall of 2016 concluding 2016 was the 14th consecutive year of online course growth. Along with the increase in students choosing online learning, adjunct faculty comprise two-thirds of the nontenure track faculty resulting in over 700,000 adjunct faculty (Yakoboski, 2018). The COVID 19 pandemic aided in increasing this trend as the shift to online instruction was a contingency plan to secure the continuation of the courses offered by universities to enable students to continue with their studies. Many instructors had to rearrange their lifestyles, move their offices off campus to their homes, and create a new mindset to accommodate a teaching methodology they were not accustomed to.

Theoretical Framework

There are two theoretical framework bases from which this research was examined. The first is Bandura's (1994) self-efficacy theory which recognizes perceived self-efficacy as people's beliefs about their capabilities to produce designated levels of performance. The second theoretical framework is Mezirow's (1978) transformative learning theory which utilizes ten stages of perspective transformational change in which to provide an understanding of critical steps in the reasoning process adults experience as they wrestle with change.

Teacher self-efficacy plays a role in the confidence of online instructors. Since online faculty may lack the experience of being online students themselves, they must gain the assurance of their ability to teach online students. Bandura (1994) notes, “Perceived self-efficacy is defined as people's beliefs about their capabilities to produce designated levels of performance.” Professional development can create a strength of self to promote the efforts of one’s belief in their capability to master activities required to succeed (Bandura, 1994). This research will aid in identifying the importance of training and support for faculty to teach online and increase teacher self-efficacy in their quest to motivate students for educational success.

Transformative learning also plays a role in developing confidence in instructors as global change has taken place specifically during the COVID-19 pandemic. Mezirow’s theory of transformative learning points out that every individual has a particular world view which may or may not be well articulated or deep rooted in an individual’s life experience (Code et al., 2022). Code et al. (2022) states, “One of Mezirow’s central claims is that individuals have difficulty changing because their world views become habits of mind or unconscious and often ingrained ways of viewing and interpreting situations and contexts,” (p.171). COVID-19 brought attention to a life crisis both personally and physically to all educational instructors. While all of society experienced fear and trauma, teachers across our world were required to move their office to a home environment and were expected to carry on teaching while dealing with their own personal fears and concerns for their families. Educators experienced a disorientation thus questioning previously held assumptions therefore seeking adequate pedagogy with which to meet the learning needs of their students (Eschenbacher & Fleming, 2020). COVID-19 brought changes which most educators were not prepared for. The transformative learning theory depicts how

educators managed the changes which occurred during the pandemic crisis and how they were able to adapt to the change and ultimately successfully teach their students.

Problem Statement

The sudden change to online teaching for residential instructors created a crisis teaching mode due to the inadequacy of preparation (Tomczyk & Walker, 2021). While instructors who taught online prior to COVID-19 had more confidence in online teaching, they had to teach students who were opposed to online learning (Ismaili, 2021). Lemay et al. (2021) noted, "online teaching and learning has generally shown that transitions are usually voluntary and/or planned; however, emergency transitions, such as the one brought upon by the COVID-19 pandemic, have relatively little body of knowledge" (p.1). Prior to the COVID-19 pandemic, many instructors had not taught online and were unfamiliar with online teaching methodologies (Tomczyk & Walker, 2021). Research conducted by Moralista and Oducado (2020) highlighted that faculty were generally unsure if they were in favor of online education due to academic dishonesty, technology integration, and computer competency, then during the transition process to online teaching due to the pandemic, feelings of hesitation and confusion were escalated.

The emergency transition to online teaching and learning due to the COVID-19 pandemic has brought much attention to the abilities of instructors to be versatile in their teaching strategies (DeCoito & Estaiteyeh, 2022). Residential instructors were forced to rapidly move to an online learning environment with limited or no online teaching abilities while online instructors had to learn to teach residential students how to learn online (Wu, 2021). Instructors from all areas of teaching modalities had to quickly adapt to new strategies in order to support student success. While one area of the transition to online learning dealt with new learning strategies, other areas of concern for instructors was transitioning to an off-campus site creating

stress, fear of digital operations, relaying successful teaching strategies to online students (Ma et al., 2021). Tramontano et al. (2021) recognized the COVID-19 pandemic accelerated the adoption of remote working practices worldwide, therefore attention should be focused on teaching competencies, digital resilience, and enabling remote working spaces. Online student learning requires educators to be able to navigate remote learning and be skilled in technology tools (Belastock, 2020). The COVID-19 pandemic has globally illustrated how rapid change affects education and the need to be versatile in academic delivery (Aristovnik et al., 2020).

Recognizing how faculty members describe their self-efficacy with implementing online instructional technology tools and changing instructional practices is theoretically significant in that it may inform future best practices for not only online teaching, but in emergency remote online teaching situations (Collins, 2022). Providing statistical data regarding teacher self-efficacy in light of immediate change and disruption due to a crisis such as COVID-19 will add to the body of research as educational institutions move forward preparing for future instructor transitions. While teacher self-efficacy during COVID-19 has been studied in various modes such as teacher self-efficacy for technology application (Ma et al., 2021), a gap in literature exists in quantitative research on higher education faculty who experienced an emergency transition into remote teaching as well as online faculty who received an abundance of students new to online learning in regard to pedagogy. The problem is teacher self-efficacy needs to be fully explored as it relates to instructors having always taught online, instructors who taught online and residentially prior to the pandemic, and instructors who taught only residentially, but were moved to online teaching due to the COVID-19 crisis.

Purpose Statement

The purpose of this quantitative causal-comparative study is to determine if there are differences in the perception of self-efficacy between groups of instructors who have been impacted by the COVID-19 pandemic. The independent variable, instructor groups, will include instructors who have always taught online, instructors who taught online and residentially, and instructors who taught only residentially, but were moved to online teaching due to the COVID-19 crisis. The instructor groups were chosen since these groups were affected by the COVID-19 pandemic. This research will specifically look at the dependent variable of teacher self-efficacy which is defined as an educators' individual beliefs and judgement of their own capability to bring about desired outcomes of student engagement and learning (Tschannen-Moran & Hoy, 2001). The specific purpose of this study is to determine if there is a difference in teacher self-efficacy identified as an educators' individual beliefs and judgement of their own capability (Tschannen-Moran & Hoy, 2001) among instructors who taught only online, instructors who taught online and residentially prior to the pandemic, and instructors who taught only residentially, but were moved to online teaching due to the COVID 19 crises.

Significance of the Study

The significance of this study is found in teacher self-efficacy as it is related to how faculty teaching confidence adjusted to an abrupt change of emergency teaching from residential to online and how online instructors dealt with new online learners. As online learning continues to grow and new normals are developed as a result of the COVID-19 pandemic, faculty are confronted by diverse student learning needs and struggle to keep pace with new instructional practices (Wynant & Dennis, 2018). Recognizing many faculty were quickly moved to cover online courses as a result of the COVID pandemic, college administrators may review their

readiness plans for future emergency online transitions as this will be an important task to ensure the quality of online education not only meets the standards set by the educational institution, but the accreditation standards as well. Faculty preparedness may potentially increase student performance and high self-efficacy in faculty (Ilieva et al., 2021).

Additionally, Oducado and Moralista (2020) identified faculty perceived themselves to have intermediate competency in using the computer when called upon to teach online in the transition from residential teaching to online teaching due to COVID-19. Ma et al. (2021) supported the concern for online teaching technological knowledge as his research identified the need for instructors to be trained in information and communication technology to be equipped with skills necessary to cope with unexpected change. As technology continues to change and update, faculty need to be able to accept technological change and be trained to utilize advances in various educational delivery methods.

Research identifies an emerging incentive to implement continued professional development to increase teacher self-efficacy which will effectively engage pedagogy in online courses (Welch & Plaxton-Moore, 2017). Increasing teacher self-efficacy will also promote adaptability to thrive in new circumstances therefore promoting the belief that one can develop the adaptability to demonstrate capability (Besser et al., 2020). Educational leadership can benefit by recognizing the characteristics of their online adjunct faculty and how increasing teacher self-efficacy will be most beneficial for student learning.

Theoretical Significance

The theory guiding this research is Bandura's (1982) theory of self-efficacy. The theory of self-efficacy has to do with an individual's belief in their ability to perform the necessary behaviors to produce specific outcomes (Bandura, 1977). Ma et al. (2021) identifies

self-efficacy as a person's perception of their capability to complete foreseeable daily tasks which shapes their decision-making processes. While much research has been conducted to investigate self-efficacy in the educational field, teacher self-efficacy is critical in the personal goals of a teacher (Ma et al. 2021). "From a social cognitive perspective, teacher self-efficacy, a sub-category of self-efficacy, has been defined as a teacher's judgement of their ability to influence student outcomes or more specifically, it is a teacher's individual beliefs in their capabilities to perform a specific teaching task at a specified level of quality in a specified situation," (Glackin & Hohenstein, 2018, p. 272). Glackin & Hohenstein (2018) also noted a teacher with high teacher self-efficacy is thought to behave in a productive manner and gain personal satisfaction from the endeavor while a teacher with low teacher self-efficacy is predicted to exhibit behaviors displaying resignation and an attitude of apathy.

Additionally, Mezirow's Transformative Learning Theory (TLT) provided theoretical underpinnings for this study as the TLT is defined as, "The process of becoming critically aware of how and why our assumptions have come to constrain the way we perceive, understand, and feel about the world; of reformulating these assumptions to permit a more inclusive, discriminating, permeable, and integrative perspective; and of making decisions or otherwise acting upon these new understandings," (Davies et al., 2020, p. 219). The TLT recognizes that a learner goes through various phases from disorientation in a crisis to reflecting on one's assumptions, planning a course of action, acquiring new knowledge and skills, and reintegrating the newly learned information into one's life (Davies et al., 2020). The TLT correlates with the COVID-19 pandemic as residential instructors found themselves in a crisis rapidly moving to a home environment thus creating a disorienting dilemma while having to work through a plan of action to be a productive teacher without access to their standard resources.

Practical Significance

The COVID-19 pandemic brought long term change to higher education. In evaluating teacher self-efficacy and understanding the transformational change process educational institutions can be better prepared to offer students valuable remote learning with quality instructors providing quality instruction. The COVID-19 pandemic brought disruption to higher education for more than two years resulting in permanent change (Dennis, 2022). Dennis (2022) identifies the student-consumer as having educational options which did not exist prior to the pandemic and will become more selective in the university they choose based on online course availability, technological advantages, and quality of instruction. COVID-19 forced educational institutions to implement a teaching model in which they were not fully prepared for and now understand quality online teaching is essential not only to future teaching practices but also to ensure universities retain student numbers and remain financially sustainable in a competitive educational market (Bashir et al., 2021). As institutions of higher education move forward after COVID-19, they will need to adapt for future crisis which moves their residential faculty to remote teaching and provide professional development and technological support.

Research Question

The following research question was proposed to help identify differences in the perception of self-efficacy between three groups of instructors who were impacted by the COVID-19 pandemic while teaching students in higher education.

RQ: Is there a difference in teacher self-efficacy among instructors who taught only online, instructors who taught online and residentially prior to the pandemic, and instructors who taught only residentially, but were moved to online teaching due to the COVID 19 crises?

Identification of Variables

The variables that are identified for this study are the teacher self-efficacy scores and the instructors that derived three teacher groups. The dependent variable is the teacher self-efficacy scores. This study contained one independent variable with three teaching modalities: instructors who taught only online, instructors who taught online and residentially prior to the pandemic, and instructors who taught only residentially, but were forced to online teaching due to the COVID-19 crisis.

Definitions

1. *Adjunct faculty*- Adjunct faculty refers to instructors hired on a contingent (term-by-term) basis (Burgmann, 2011).
2. *Distance education*- Distance education is defined as a method of teaching where the student and teacher are physically separated (Kentnor, 2015).
3. *Instructor groups*- Instructor groups are specific groups used for research methods to show evaluate detailed information and a popular method for gathering quantitative data (Morgan, 1996).
4. *Online education*- Online education can be defined as instruction using the internet and computers (Mandernach & Holbeck, 2016).
5. *Self-efficacy*- Self-efficacy is people's beliefs about their capabilities to produce designated levels of performance that exercise influence over events that affect their lives (Bandura, 1994).
6. *Teacher self-efficacy*-Teacher self-efficacy is a teacher’s judgment of his or her capabilities to obtain desired outcomes of student engagement and learning (Henson, 2002).

7. *Teacher Self-Efficacy Scale* - The instrument used to measure the sense of teacher self-efficacy (Kocabas, 2018).
8. *Online instructors*- instructors are teaching online courses that were designed by someone other than themselves and in an asynchronous teaching environment (Richardson et al., 2016).
9. *Online and Residential instructors*- instructors who have taught in both teaching modalities with residential instructors being those faculty who regularly interact with students on a college campus and in an asynchronous teaching environment (Golde & Pribbenow, 1999; Richardson et al., 2016).
10. *Residential instructors*- instructors who play a significant role in classroom teaching and the schooling process on a college campus (Nushi et al., 2022).

Summary

Each of the teacher groups could have been affected by the COVID-19 pandemic as online instructors who were already teaching online obtained a new influx of residential students who were new to online learning thus creating additional instruction to ensure students were aware of course requirements. The other two teacher groups were instructors who taught online and residentially and instructors who taught solely residentially were forced to online teaching only. Both residential and online instructor groups were challenged by a disruption to their normal teaching modes thus a concern for their confidence in teaching. Since teacher self-efficacy is key to ensuring faculty achieve a level of self-confidence in conveying applicable course content and ensuring student engagement, teacher self-efficacy was studied amongst the teacher groups.

Chapter 2: Literature Review

Overview

The purpose of this literature review is to present essential elements of transformational change which occurred during the COVID-19 pandemic to higher education instructors who have taught online and those who have taught both online and residentially either by choice or forced due to emergency remote teaching, to investigate teacher self-efficacy in these various teaching environments, and to review the impact of how COVID-19 has changed perspectives to online teaching. The chapter opens with the theoretical framework. Two theoretical frameworks are used to support this study. The study is initially grounded in Bandura's (1977) theory of self-efficacy. In addition, the transformative learning theory is foundational to this research as Mezirow (1978) provides a basis in understanding the reasoning process adults experience as change avails itself from a disorientating dilemma. A thorough review of the literature associated with self-efficacy of higher education instructors as they incorporate possible change in teaching due to the transitions affecting educational institutions during and after the COVID-19 pandemic. The chapter concludes with a summary presenting the focus of teaching during and after a worldwide pandemic and a viable need for identifying an emergency change in teaching strategies.

Theoretical Framework

The theories that guided this research are the Theory of Self-Efficacy (TSE) (Bandura, 1982) and the Transformational Learning Theory (TLT) (Mezirow, 1978). The TSE asserts people's beliefs about their capabilities to produce at a specific level of performance influences how they motivate themselves (Bandura, 1994). The TLT theorizes that teaching and learning

are connected with past experiences and how new perspectives can adjust to changes in teaching and learning environments (Mezirow, 1978).

Self Efficacy

Self-efficacy is one of two theoretical frameworks which grounds this study to measure and determine the difference in self-efficacy scores between instructors who have always taught online, instructors who taught online and residentially, and instructors who taught only residentially, but were moved to online teaching is Bandura's (1982) Theory of Self-Efficacy. Bandura (1994), noted “People with high assurance in their capabilities approach difficult tasks as challenges to be mastered rather than as threats to be avoided.” The self-efficacy theory supports the idea that an instructor’s sense of efficacy has been related to student achievement outcomes (Tschannen-Moran & Hoy, 2001b). Within the theory of self-efficacy, Bandera utilized terms which directly connect with the learning and teaching processes needed for online instructors to understand in order for them to feel successful in teaching their students. These terms include: the cognitive processes which aids the instructor in the organization of information, motivation which moves the instructor into action with persistency and intensity by using the professional development presented, self-regulation which assists the instructor in having influence over their own motivation, thought processes, emotional states, and patterns of behavior, and perceived self-efficacy which helps the instructor understand the beliefs about their capabilities to produce effects (Bandura, 1994).

The cognitive processes of self-efficacy involve people's beliefs as their efficacy shapes the type of anticipatory scenarios they construct and rehearse (Bandura, 1994). Bandura also noted, “Those who have a high sense of efficacy, visualize success scenarios that provide positive guides and supports for performance. Those who doubt their efficacy visualize failure

scenarios and dwell on the many things that can go wrong," (Bandura, 1994, p. 1). As a person visualizes and anticipates outcomes of their actions, they set goals and plan courses of actions for themselves which are designed to focus on valued futures, therefore conceived future events become current motivators and regulators of behavior (Bandura, 1989). Research conducted by Mamaril et al. (2016) noted people who believe in their own capabilities tend to engage in their work for their own mastery and find their work useful and interesting. This research applies to instructors who are able to believe in what they are able to do to begin to create a mastery and interest in their online teaching. Therefore, productive sessions of professional development will move an online instructor forward in their belief in their teaching abilities. Wynant & Dennis (2018) indicated professional development conducted in an online format for online instructors is comparable in knowledge and skill learning outcomes to traditional in person training with advantages being flexible in timing and benefits of pace of instruction. When an online instructor can easily gain access to professional development material and know the content will give them success, they have begun the cognitive process of anticipating and visualizing achievement for themselves and their students. The cognitive process of self-efficacy will then move the instructor to a motivation stage which requires the instructor to place into action the skills learned.

The motivational process promotes the initiative to choose the courses of action from various professional development skills with intensity and persistence. Since self-beliefs of efficacy play a key role in the self-regulation of motivation, people form beliefs in what they think they can do then begin to anticipate likely outcomes from the prospective action, set goals for themselves, and plan courses of action for future value. (Bandura, 1994). Bender et al. (2015) notes researchers agree on teachers' efficacy being situation-specific which enables them to

maintain a reason for initiation, direction, and intensity of teaching the field of their specialty. Bandura (1994) noted people who have a strong belief in their capabilities exert greater effort when they fail to master the challenge therefore, strong perseverance contributes to performance accomplishments. Eyvind and Christophersen (2017) confirms teacher efficacy indicates a curvilinear progression in that the sense of mastery increases with experience. On the contrary, teachers with low self-efficacy lack motivation needed to improve and may leave teaching altogether inferring the mastery and self-efficacy are desired for teachers to move forward towards continued improvement (Eyvind & Christophersen, 2017). Overall, without motivation, when people are faced with obstacles which may inhibit them from being productive, they may harbor self-doubts about their capabilities, slacken their efforts, or give up. While general motivational processes initiate action, self-efficacy relating to self-regulation assists the instructor in having influence over their own motivation, thought processes, emotional states, and patterns of behavior (Bandura, 1994).

Since self-efficacy, or confidence in learning, relates to self-regulation, self-regulation can be related to the balance of self-appraisal which can help to sustain a favorable sense of personal efficacy (Bandura, 1994; Cho et al., 2021). Research has indicated self-efficacy of faculty involved in learning a professional development task positively relates to their effort and cognitive engagement (Cho et al., 2021). Cho et al. (2021) also noted strong control beliefs led faculty to persist in challenging professional development learning situations, resulting in improved self-efficacy. Faculty with high control beliefs about learning believed that they could do well if they worked efficiently and attributed their failure to themselves instead of external factors such as lack of time and other work-related demands (Manavipour & Saadian, 2016). Artino and Stephens (2007) notes self-regulated learners are characterized by active participants

who efficiently control their learning experiences by organizing the information to be learned, monitoring their thinking processes, and seeking help when they need to better understand a concept all the while holding positive motivational beliefs about their capabilities of learning the content provided. Overall, self-regulation is based on a high self-efficacy which can be described as an active, constructive process where learning is established on past experiences and contextual features of the current environment (Artino & Stephens, 2007).

Self-regulation lends to perceived self-efficacy which aids the instructor in understanding beliefs about their self-regulated capabilities (Bandura, 1994). Perceived self-efficacy focuses on the attribute which assists instructors to understand beliefs about their capabilities (Bandura, 1994). Timely and adequately presented professional development lends to providing instructors a basis in the belief of their potential. Teachers with a firm belief in their perceived self-efficacy may translate their knowledge and abilities into proficient action, whereas those who lack such beliefs will most likely not attempt to make things happen in the online class environment (Zee et al., 2017). Zee et al. (2017) continues to note when instructors live up to their generalized sense of perceived self-efficacy, they are more likely to provide high-quality instruction, adopt proactive teaching approaches, and convey supports that activate students' motivation and engagement in class. While online instructors strive to ensure they meet the high demands of teaching from expected knowledge of institutional professional development, a resilient sense of perceived self-efficacy will aspire them to enable their students to gain academic achievement. In addition to Bandura's (1977) theory of self-efficacy, the transformative learning theory will aid in directing instructors out of a potential low self-efficacy concern by providing an avenue of coping with new information and how to apply the information learned for productive instruction.

Transformative Learning Theory

"The urgent imperative to 'move online' caused by the recent COVID-19 pandemic has added stress and workloads experienced by university faculty and staff who were already struggling to balance teaching, research and service obligations, not to mention the work-life balance (Rapanta et al., 2020, p. 924). A change has taken place which will forever be a memory mark in our educational environment. Many faculty and students together were forced into an alternative teaching and learning environment causing a disorienting dilemma which is the first of Mezirow's ten stages of perspective transformation in his transformative learning theory. The transformative learning theory provides an understanding of critical steps in the reasoning process adults may experience as they wrestle with changes (Mezirow, 1978; King, 2005). King (2009, p.4) notes, "Through perspective transformation experiences, adult learners shift their understanding or assumptions in order to cope with new information." The changes a learner has experienced are often significant steps in a lifelong journey toward their full potential (Cranton & Carusetta, 2004).

Mezirow based his research on transformative learning as an educational theory which addressed several concepts such as domains of learning and habits of mind to understand the theory and the processes of the stages of transformational learning (Hoggan, 2016). The transformative learning theory is defined as a process which effects change in a frame of reference within an experience in which a move is made from one activity to another (Mezirow, 1997). The change in which we are subjected to, "transforms our frames of reference through critical reflection on the assumptions upon which our interpretations, beliefs, and habits of mind or points of view are based," (Mezirow, 1997, p. 7). The new experience which is

encountered is either rejected or must be transformed to assimilate a new frame of reference (Mezirow, 1997).

To help better clarify and understand how the transformative learning theory supports this research, ten stages of perspective transformation will be discussed. Stage one is a disorienting dilemma which represents a crisis. This research focuses on the COVID-19 crisis and how college instructors dealt with forced online teaching by universities. Stage two brings self-examination to explore feelings such as guilt or shame followed by stage three, a critical assessment which allows the individual to look at their past assumptions and review them critically (WGU, 2020). In dealing with stages two and three, instructors will need to examine their abilities to productively teach online when some had never taught online previous to the pandemic crisis. Stage four is the recognition of shared experiences and brings a realization in which others have negotiated similar changes and challenges (Brinson, 2021). Stage five, exploring options for new behavior, brings about the exploration of alternative options, new ideas, and the possibility of new roles in which to begin to deal with the crisis (Eschenbacher & Fleming, 2020). In exploring new roles, instructors may begin to reach out to other instructors who have online teaching experience and begin to evaluate teaching options. Stages four and five are also key for the educational institution to be prepared to deliver quality professional development to move the instructor forward with confidence. Stage six, planning a course of action, is where the instructor has a better understanding of what needs to happen to form a strategy to learn new perspectives for future teaching success (Brinson, 2021). Stage seven is the acquisition of knowledge which begins the implementation of acquiring the skills and knowledge necessary for the transformation to be successful (Brinson, 2021). Stages six and seven ushers in the opportunity to plan courses of actions and acquire the new knowledge to decrease the initial

trauma of the disorienting dilemma. Instructors in these stages have examined the crisis and have searched out productive avenues in which to proceed with their view of successful teaching. Stage six specifically focuses on a plan of action while stage seven utilizes the acquired new knowledge to put the plan into practice (Eschenbacher & Fleming, 2020). Stage eight, trying on new roles, begins the hands-on and active stage in which the new skills are put to the test taking advantage of experiential learning (Brinson, 2021). Stage nine is building confidence. Self-efficacy plays an important role in stage nine's building confidence as the instructor will need to realize the need for adaptability as well as persistence and strength of motivation to teach in a crisis situation (Ma et al., 2021). Finally stage ten, reintegration, brings the emergence of new perspectives and new learning to acclimate to the new teaching environment (Brinson, 2021). These ten stages will be discussed in detail further explaining transformational learning and recognizing the benefits of fighting through a crisis while developing increased self-efficacy with confidence and determination. The transformative learning theory identifies the common in the contradictory while helping us to live with uncertainty fostering a democratic learning culture (Eschenbacher & Fleming, 2020).

Related Literature

The following is a summary of related literature which depicts components specific to educational faculty as they experienced the transitional move to online teaching during COVID-19. The related literature begins with the pandemic crisis and moves the instructor through the process of how the emergency transition to online teaching affected their teacher self-efficacy, changes to their teaching processes, and the necessity to prepare for future teaching transitions. The literature also reveals how the various modalities of teaching whether the instructor was new

to online teaching or was a previous online instructor was able to maintain student learning success.

A Pandemic Crisis

The pandemic crisis created a disorienting dilemma representing the initiation of a transformative learning experience which begins with a life crisis triggering a questioning of assumptions which results in transformed beliefs (Halstead & Taylor, 2010). While the disorienting dilemma does not have to be a life crisis, it could be a process requiring change, even experiences prior to a life-event crisis can catalyze perspective transformations (Laros, 2017). A disorienting dilemma is associated with feeling ashamed of being disoriented and might be accompanied with fear, loss, and anticipatory grief leading to confusion on how to cope with the current crisis (Eschenbacher & Fleming, 2020). Berinato (2020) identifies the global pandemic as a collective grief which has emerged and can be identified in the transformative learning theory as a disorienting dilemma associated with anticipatory grief as it relates to COVID-19.

> With a virus (COVID-19), this kind of grief is so confusing for people. Our primitive mind knows something bad is happening, but you can't see it. This breaks our sense of safety. We're feeling that loss of safety. I don't think we've collectively lost our sense of general safety like this. Individually or in smaller groups, people have felt this. But all together, this is new. We are grieving on a micro and a macro level. (Berinato, 2020, p. 2)

Eschenbacher and Fleming (2020) note the individual and global crisis arising from COVID-19 does not seem to offer a way back to normal thus learning transformatively will be key to regain acceptance of the new normal.

As in the case of the COVID-19 crisis, the disorienting dilemma embeds the assumption that learning can be found in self-directed learning, prior experience, and developmental roles which demand immediate application of new knowledge and internal motivation (Johnston, 2011). Educators overall experienced disorientation as COVID-19 swept the world. Both residential and online instructors were forced to deal with not only students, but their own personal families suffering through this unknown and unfamiliar pandemic. While students looked to their instructors for answers, instructors themselves were seeking knowledge and understanding. Residential faculty who were rapidly directed to teach online found themselves frantically searching for technological and pedagogical help in being able to present quality learning material in their new course environment. In this perspective, a disorienting dilemma had begun leading faculty to a phase of self-examination in search of self-efficacy and a basis of knowledge in which to draw from to perform their expected tasks. In the disorienting dilemma stage, instructors may begin to doubt their efficacy by visualizing failure in various scenarios and dwell on the teaching tasks which may go wrong (Bandura, 1994). Research by Besser et al. (2020) noted a significantly higher level of stress among university teachers was found when instructors were moved to online teaching from a residential teaching environment due to the pandemic. The disorienting dilemma from the pandemic could also be evidenced in, “The anticipated difficulties with technology, losing connection with students, insufficient understanding of online pedagogical knowledge, and time-consuming features of online teaching” (Ma et al., 2021, p. 6677). According to Ma et al. (2021), when instructors moved to an online teaching environment from residential teaching, they dealt with various emotions trying to fulfill their teaching obligation by spending extra time accustoming themselves to online teaching, designing methods to engage students, and searching for virtual resources from

which to enhance their courses. The disorienting dilemma stage of the transformative learning theory coincides with phases of low self-efficacy as instructors without online teaching experience reported lower self-efficacy when they transformed to online teaching. Ma et al. (2021) noted a key finding from their research was the low online teaching self-efficacy at the beginning of the online teaching which is common among instructors where a lack of prior experience affects performance. The study conducted by Ma et al. is supported by research conducted by Devica (2015) which indicates teachers have a low self-efficacy teaching online due to a lack of relevant experience. In order for instructors to transform their beliefs of inability, fear, and low self-efficacy of teaching in an unfamiliar online environment, professional development would need to be implemented which supports the move to a sense of higher self-efficacy (Richter & Idleman 2017).

Self-examination

An individual who experiences a disorienting dilemma such as COVID-19 will examine himself through various emotions such as fear, guilt, or shame (Yıldırım & Yelken, 2019). The individual will examine their beliefs and understanding regarding past experiences and how to connect the disorienting dilemma to their base of previous knowledge (WGU, 2020). Self-examination in the transformative learning theory can be viewed as a redescription of the way an individual might view themselves and the world around them (Eschenbacher & Fleming, 2020). Mezirow (1989) identified the self-examination stage as an opportunity to redescribe the circumstances of assumptions within the disorienting dilemma, thus being able to deconstruct the dilemma and seek ways to change avenues of solving the problem. Upon initiation of the dilemma and within self-examination, the individual's frame of reference is revealed challenging the integrity of the deeply held assumptions being challenged (Eschenbacher & Fleming, 2020).

As instructors begin to compare their teaching self-efficacy prior to, during, and after COVID-19, they create a perspective transformation on how to teach efficiently in a different teaching environment and to students who are not familiar with that teaching environment. Educators may consider urging learners to converse about the disorienting dilemma in an open forum which directs them to learn transformatively. Yıldırım and Yelken (2019) noted faculty will need to interpret new experiences, develop new strategies, and gain a new motivation to carry on their teaching tasks. Research conducted by Lockee (2021) identified changes in teaching practices, especially in the transition to online teaching can strongly impact teacher emotions and motivations. Instructor anxiety is also raised as students make the new shift to the online learning environment as well (Lockee, 2021).

The sudden shift to full online instruction for residential faculty required them to reevaluate and self-examine teaching strategies as they had to adjust their teaching plans, teaching styles, and assessment methods while helping their students face the challenge to quickly adapt to the "new normal" (Lapitan et al., 2021). Various emotions were triggered in the instructors by the sudden change to online instruction as residential instructors faced potential challenges of unstable internet access, possible issues of the availability of electronic devices to service the needs of the instruction required by the educational institution, and time constraints to accommodate a positive learning environment for their online students. Fear of unfamiliarity with technology, making accommodations in their home environment, juggling other employment, and health concerns led residential instructors to self-examine their current position and question their employment longevity (Will et al., 2020).

Since self-examination relates to the study of one's behavior and involves emotions according to the transformative learning theory and incorporates one's beliefs and motives, it

parallels self-efficacy as self-efficacy is the belief in one's capabilities to organize and execute the courses of action required to manage prospective situations (Bandura, 1989). Self-efficacy from a teaching perspective can be more specifically identified as, "a teacher's individual beliefs in their capabilities to perform a specific teaching task at a specified level of quality in a specified situation" (Glackin & Hohenstein, 2018, p. 272)

Teacher self-efficacy has been affected as COVID-19 has created psychological stress and emotional exhaustion in some teachers as they incorporate additional work in creating a new learning environment for their students and dealing with their own personal concerns of health and family (Weißenfels et al., 2022). Research conducted by Besser (2020) identified stress and anxiety resulting in complete disruptions of daily routines. In addition to the disruptions of daily routines, Besser (2020) noted heightened anxiety and distress among people due to the lengthy time of the pandemic, the continued indecisiveness of regulations surrounding the handling of the pandemic, and the lack of knowledge as to the end of the tightened regulations. In a study conducted by Boakye (2021), instructors who had not taught online prior to COVID-19 indicated anxiety by noting their lack of ability to deliver course content utilizing the various features of the online learning management system, maintain student chat, and the excessive emails from students new to online learning. For the above listed concerns for first time online instructors, lower self-efficacy was evident as low self-efficacy can be related to decreased capacity to exercise self-influence by goal challenges (Bandura, 1994). While first-time online instructors felt anxiety, instructors with prior online teaching experience reported they were more motivated to teach online (Ma et al., 2021). The motivation to teach online could have stemmed from the desire to help their institution to maintain pedagogical student learning and collaborating with their colleagues to deliver their online courses. While the future is uncertain of potential new

outbreaks or other worldwide dilemmas, shifting to online instruction will be a definite plan for most universities. To increase self-efficacy and eliminate fear and anxiety among instructors, developing a professional development strategy for all instructors to become efficient in online instruction will be necessary.

Assessment of Assumptions

As an instructor begins to assess the assumptions of a crisis, they will begin to take a more comprehensive look at their past assumptions regarding teaching strategies, review them critically, and realize the change that may be necessary to move through the disorienting dilemma (WGU, 2020). Critical assessment begins by evaluating and validating previous assumptions and knowledge then remove biased perspectives (Brinson, 2021). As instructors begin to view their previous teaching strategies, they may try to integrate them in the changed and new teaching environment maintaining a biased perspective to the previous teaching methods. With continued evaluation, alternative teaching strategies may have to be utilized in light of the disorienting dilemma to provide successful learning in a changed teaching and learning environment. According to Caruana et al. (2015), when applying the transformative learning theory to teacher development after a disorienting dilemma, teachers struggle to make a critical assessment of their own assumptions and have a tendency to emulate the beliefs and behaviors portrayed in their previous learning experiences. The results of the study conducted by Caruana et al. (2015), identified most instructors will move toward taking action as they focus on critical reflections and question their personal perspectives after assessing their learning experiences.

Anand et al. (2020) recognized critical reflection by identifying three key perspectives: critical reflection focuses on what is happening, how did this experience (disorienting dilemma)

come to be, and why is this experience framed in this way. When these three perspectives are utilized, the individual, "will have a bearing on how they construct meaning from their experience and capacity to critically reflect and engage in rational discourse (Anand et al., 2020 p. 733). As residential instructors review the first key perspective, what is happening, they realize they have been abruptly transitioned to online teaching. Their teaching content and teaching platform suddenly have a new learning management system. The rapid pivot from face-to-face education to fully online instruction prompted faculty to explore and use various technologies and methodologies in which they were not accustomed in order to deliver curricula (Wilson et al., 2021). As faculty were quickly moved from their normal teaching environment to their home environment, they contemplated the second key perspective; how did this experience (disorienting dilemma) come to be? COVID-19 thrust them into an online teaching environment within a matter of weeks and they were asked to implement online teaching due to university closures with no choice and without consideration of preparedness or online teaching interest (Cutri et al., 2020). Finally, the third key perspective; why is this experience framed in this way? The COVID-19 pandemic left very little time to evaluate why the experience was framed in a specific way. The closure of college campuses was mandated as government officials instigated lockdowns disrupting thriving classroom environments and forcing education providers to rapidly deploy online learning technologies to facilitate engagement with learners remotely (Turnbull et al., 2021). In assessing the situation, faculty found themselves scrambling to obtain technology, redesigning course material to accommodate online learning, and scheduling course presentations. The experiences were framed in a way in which the instructor had no input or viable contribution to how the situation would be handled. Quick assessment was required to maintain the quality of the course being taught and continuity of student learning.

In the critical assessment stage instructors will begin to assess their technological and pedagogical knowledge as many moved from residential to online teaching. Using an exploratory study, Rapanta et al. (2020) conducted a study on pedagogical preparedness of university teachers with no or little experience in online teaching prior to COVID-19 recognizing a continuous assessment model of self-paced and asynchronous activities must be adopted. Rapanta et al. (2020) also noted extending educational possibilities to all universities may include blended learning to preserve and enhance traditional values of higher education. Mezirow (1978) noted the process of critical assessment by which we define and solve problems becomes the context of most learning. Critical assessment is necessary as adult learners continually reacclimate to change as educational institutions progress to accommodate the fast pace of today's society.

Faculty Shared Experiences After Change

Shared experiences are found in recognizing others have negotiated similar change (King, 2009). Instructors can find commonality as they realize the change they are experiencing is shared among colleagues. Prior, during, and post COVID-19 pandemic, instructors knew they were not alone in the transition in which they had to undergo. Whether it was online instructors receiving students who had never taken online courses thus new to online learners or instructors who taught residential courses having to make content adjustment to make their courses relevant and practical. Certainly, discontent was an issue, therefore dialogue amongst colleagues is needed to process through the change. Fisher-Yoshida et al. (2005) notes, "Dialogue is one type of communication that helps people really hear each other and communicate to resolve their issues." While it is evident people learn from each other, transformative dialogue aids in transforming relationships to find common realities and move to solutions (Fisher-Yoshida et al.,

2005). As an avenue of dialogue is initiated and provided for instructors, exploration of options for new or adjusted actions can begin to form to allow for productive learning and teaching to continue (King, 2009).

Due to COVID-19, recognition of shared experiences among faculty was found to be prominent in the area of technology skills as faculty rapidly were removed from their campus office to a home office to initiate online teaching. Tabata and Johnsrud (2008) note distance education relies on faculty who can provide quality instruction which utilizes technology to deliver courses, but many faculty who use assorted technology to facilitate thier work while teaching residentially resist using technologies in delivering distance education. Tabata and Johnsrud (2008) further noted faculty are deterred from participating in distance education delivery as they are concerned about the time it takes to learn the technology required to support developing course material. As a result of the frustrations instructors experienced in being removed from a familiar teaching environment, lack of online technology teaching skills, and the lack of confidence in developing course materials for online delivery, faculty found themselves needing support from their peers to collaborate, network, and socialize as research indicates peer support drastically improves teaching and job satisfaction (Gallagher, 2020).

Recognition of shared experience of online teaching perception among residential faculty as they moved to an online teaching environment could have existed as research has shown that faculty who do not teach online have a more negative perception of online instruction while instructors who regularly teach online have a more positive perception of online instruction (Oducado & Moralista, 2020). Faculty who view distance education as being less equivalent to traditional face-to-face education had already established a negative perception, therefore the need for shared experiences were important as they were forced to an online teaching

environment (Tabata & Johnsrud, 2008). In the initial onset of the transition to online teaching, as the COVID-19 pandemic caused educational transitions, faculty may have considered terminating or retirement as the frustration levels mounted. “Faculty perception as to the quality of instruction and learning by distance may contribute toward determining whether to participate or not,” (Tabata & Johnsrud, 2008 p. 626). According to motivational processes of self-efficacy Bandura (1994) notes, “When faced with obstacles and failures people who harbor self-doubts about their capabilities slacken their efforts or give up quickly.” Along with the possibility of the negative perception of transitioning to online teaching, stress and anxiety resulted as there was complete disruptions in daily routines (Besser et al., 2020). This was confirmed in a survey conducted during the pandemic by Ahrendt et al. (2020) which highlighted that about 25% of employees perceived remote working to cause a high emotional demand. For faculty who had difficulty in adjusting to a remote environment to teach from a new platform in which they were not familiar, shared experiences with other faculty could be considered a vital aspect of a successful adaptation to online teaching.

Shared experiences offer a positive effect as instructors participate in collegiality, where faculty members belong to a community of colleagues who value their contributions to the institution and offers opportunities for faculty members to learn from one another by having a sense of belonging and inclusion (Terosky & Heasley, 2015). “Social interactions with significant others and membership in groups are not peripheral forces influencing a person’s actions; they are generative forces involved in the very production of a person’s activities and ways of making meaning of the world” (Terosky & Heasley, 2015 p. 149). Shared experiences with faculty peers while teaching remote are more likely to have an increased self-efficacy thus providing a quality online learning experience for their students as noted by Bandura (1994).

Bandura (1994) pointed out that people in a similar work environment to themselves flourish by believing that they too possess the capabilities to master comparable activities required to succeed.

Exploration of Options

A crisis such as COVID-19 brings an individual to explore the options after a realization of the discontentedness of the disorienting dilemma. Exploring the options is critical for intentional and well-planned professional development to move instructors to successful and confident plans of action. COVID-19 forced instructors to look to new actions to become compatible with the transition to online teaching or with students who were unfamiliar with the online learning platform. During the transition to online teaching from primarily residential teaching, instructors had to explore their options as online teaching involves a diverse array of tools, resources, pedagogical approaches, organizational arrangements, and monitoring systems (Rapanta et al., 2020). Residential instructors transitioning to online teaching were faced with ensuring their internet capabilities were adequate to handle their teaching responsibilities. Instructors who were experienced with online teaching and were already teaching from an off-campus location had to ensure their existing technology was updated and prepared for increased usage.

The exploration of options helps to initiate new or improved practices and cognitive endeavors with like-minded colleagues as instructors of various age-groups and educational backgrounds looked toward successful teaching by exploring the educational options available to them by their institution during and after COVID-19 (Nohl, 2014). While exploring options, teacher preparation begins with communication since communication is key to remote teaching. In the case of transitioning from face-to-face to strictly remote teaching, faculty had to change

the way in which they interacted with their students and colleagues thus immediately causing frustration and angst (Meyer, 2021). Communication avenues and frequencies were explored recognizing communication had to increase to includes new ways to interact with students and peers (Meyer, 2021).

Exploration of options also included technology integration. While technology integrations have been discussed and the importance of online teaching has become a reality for most colleges, it was not fully embraced by many at the onset of the COVID-19 pandemic. An article posted by Tick (2021) found, before COVID-19, only a few educational institutions were implementing online or blended learning methods and were transitioning to online teaching at a very slow rate but when the pandemic hit everyone had to switch from offline to online classes to the point at which 191 countries in the world (98% of the global student population) switched to online lessons. As faculty and educational leadership continue to explore the options in the movement from face-to-face learning to remote teaching, more developed resources will surface as well as the comfort student feel with remote learning (Tick, 2021). As online learning became the default learning platform during the COVID-19 pandemic, technological developments make it imperative for college leaders and the policymakers who govern them to make digital transformation and technology a much more central strategic priority, especially when it comes to their core businesses: learning and credentialing (Gallagher & Palmer, 2020).

Exploring the options integrated concerns in teacher self-efficacy as teachers can perceive themselves very effective in teaching but feel less effective when applying specific teaching practices such as teaching in an online teaching environment (Weißenfels et al., 2022). Professional development options are critical in this phase as instructors, “who are more likely to participate in distance education also perceive their instructional skills as higher” (Tabata &

Johnsrud, 2008, p. 642). Instructors may feel they need assistance in developing the necessary skills to feel successful in navigating through the disorienting dilemma, therefore, making instruction designers and technical support readily available will create open options for teaching success. Self-efficacy shapes the types of anticipatory scenarios people construct and rehearse. Therefore, professional development is critical in this phase to help instructors acquire the knowledge and skills for implanting the process directed from the educational institution (Bandura, 1994; Nohl, 2014).

Planning a Course of Action with Goals

Once faculty have understood they have a shared commonality originating from the disorienting dilemma and realize their past assumptions could be altered, perspective transformation can begin by planning a course of action (WGU, 2020). Planning a course of action phase allows instructors to make decisions about problems. Instructors then can gain strategies for learning new skills, seeing new perspectives, talking their plans out, and gaining insight from professional development available to them (Mezirow, 1978; WGU, 2020). Planning a course of action requires philosophical rethinking of the nature of teaching and learning, connections among faculty, and development of educational platforms which requires efficient and quality professional development (Zhu & Liu, 2020). Mezirow (1978) notes planning a course of action should also build confidence in beliefs and understanding while enabling an individual to make their own decisions. Instructors may begin to realize they will need to make decisions in their online environment without direct communication from their peers or leaders. In this case, confirmation of planning a course of action aids in gaining confidence and increasing teacher self-efficacy within the learning environment.

Planning a course of action also involves goal setting. According to perceived self-efficacy, Bandura (1994) notes the capacity to exercise self-influence by goal challenges provides an increased cognitive mechanism of motivation. Bandura's (1994) research confirmed challenging goals enhance and sustain motivation. Setting goals in an unfamiliar teaching scenario as those experienced by residential faculty moving to online teaching, can be challenging as the goals set may not be realistic. Research conducted by Echeverría et al. (2022) identified differences between theory (what teachers say they will do) and practice, (what teachers actually do) as they observed significance variability between the competencies the teachers wished to achieve in their students as opposed to the competencies that really worked. Their study noted under half of the teachers stated they wished to develop competencies although these competencies were only related to a third of the activities they performed (Echeverría et al., 2022). As instructors plan their course of action, departmental support in the area of professional development from course designers is crucial to their success.

Acquisition of Knowledge After a Crisis

Acquisition of knowledge will move instructors forward in their teaching abilities and self-confidence. Mezirow (1978) identifies the acquisition of knowledge in which skills and knowledge are gained based on the understanding of past beliefs and reevaluating the individual's perception of the crisis. The acquisition of knowledge allows the idea of developing a new base of knowledge which begins as a professional practice recognized as "best practices" in the educational arena (Kreber, 2006). Kreber (2006) also noted personal knowledge constructed on the basis of teaching experience is more valuable than theoretical or research-based knowledge on teaching because it cannot be directly applied to practice. In the case of the COVID-19 pandemic, there was very little time for instructors who had not taught online prior to

the pandemic to gain research-based knowledge, therefore they relied on the acquisition of knowledge to lead them through the changes needed to develop new teaching strategies as they were unprepared to teach remotely (Nworie, 2021).

While acquisition of knowledge is critical, self-efficacy will need to be redeveloped in the newly applied knowledge. Instructors will need to gain confidence as many experienced setbacks and unexpected challenges while moving to the online teaching environment. Nworie (2021) noted faculty faced challenges such as lack of access to digital devices, no or slowed internet service, and insufficient bandwidth which compounded issues to which theoretical based knowledge was insufficient. Nworie (2021) recognized the realization of the acquisition of knowledge as the difference between well-planned and developed online courses and the eclectic methods meshed together hurriedly to meet the urgent demands of the situation as experienced in the transition to online courses in COVID-19; nevertheless, the lessons learned from the experience should not be discarded.

Self-efficacy plays a critical role in the acquisition of knowledge as Bandura (1994) recognized how people's beliefs in themselves affect how much stress and depression they experience in difficult situations. Bandura (1994) also noted the most effective way of creating a strong sense of self-efficacy is through mastery experiences. While instructors maintain mastery experiences in their teaching abilities and pedagogical knowledge of course content, their perceived self-efficacy to exercise control over stressors such as lack of internet efficiency or transitioning residential course to online courses plays a central role in anxiety arousal.

In light of COVID-19, research has identified areas of improvement to help instructors move through the inhibitors of acquisition of knowledge. Research conducted by Zuo and Juvé, (2021) revealed while technological support can mitigate some of the restraints, crafting online

education experiences to allow for small group, peer-to-peer, and social interactions are vital to continued professional and identity development. Zuo and Juvé, (2021) also noted the importance of taking time to ensure the pedagogical content being offered follows best practices in developing and disseminating quality online education is paramount for a broader acceptance. Innovative approaches to provide professional development to instructors will help them acquire the knowledge they need to not only transition through various learning environments but also conduct learning with and increased self-efficacy.

Instructor New Roles After a Crisis

Provisional trying of new roles goes beyond just learning about something new, it is actively working to understand and experience new knowledge and new skills (WGU, 2020). New roles aid in creating relationships with colleagues as discussions arise from completing tasks and comparing results. New roles for many instructors during and after COVID-19 were developed as a result of moving to an online learning environment. While the pandemic brought about positive experiences gained during the forced remote teaching and learning period, time, effort, and innovative resources will be required to keep the change and new roles of instructors sustainable (Nworie, 2021). Institutional leadership recognized pedagogical adaptations proved to be pivotal as traditional residential teaching models do not translate to remote learning (Barron et al., 2021). Additionally, Barron et al. (2021) noted the pandemic has recalibrated how teachers divide their time between teaching, providing teacher presence in an online learning environment, and administrative tasks. New roles also include new avenues for professional development. Various countries responded to new roles of professional development: Cost Rica developed a digital toolbox with pedagogical resources; Brazil organized frequent two-hour conversations between leadership and teachers; and Peru reacted by rapidly changing

institutional guidelines to reduce instructor administrative responsibilities (Barron et al., 2021). Provisional trying of new roles begins with empowering instructors by investing in the necessary skills to develop the full potential of remote teaching and learning (Barron et al., 2021).

Instructor Competence

A key to success is building competence in the ability to do something successfully or efficiently (Mezirow 1978). Building competence involves developing a strong sense of self-efficacy to produce designated levels of performance which exercise influence over events that affect our lives (Bandura, 1994). Building competence also involves adaptability to various teaching environments. Competence associated with adaptability was a struggle for some residential instructors as they moved to an online teaching mode indicated in a study conducted by Besser et al. (2020), as they noted relocation to an isolated teaching environment during COVID-19 indicated significantly higher levels of stress combined with a negative mood and lower levels of concentration, focus, and motivation. In contrast, Ma et al. (2021) reported higher levels of competence among instructors who had prior experience with online teaching during the COVID-19 transitions. A key fact from the findings by Ma et al. (2021) noted low online teaching self-efficacy at the beginning of the COVID-19 teaching transition from a residential to a remote location primarily due to lack of prior experience and the anticipated challenges which surround a new change. Ma et al. (2021) concluded that instructor competency can be increased dramatically by equipping instructors with technological skills necessary to cope with unexpected change due to a crisis such as COVID-19.

Acquiring a repertoire of competencies for creating and maintaining successful teaching abilities, leadership will need to produce professional development which will accommodate instructors new to online teaching as well as seasoned online instructors (Curran & Murray,

2008). Building competence in online instructors should be provided in a variety of methods to accommodate lifestyle, learning abilities, age, and geographic locations as people's beliefs in their coping abilities affect their level of perceived self-efficacy (Bandura, 1989).

Instructor Reintegration After a Crisis

Reintegration is an act of restoring or the process of integrating someone back into society (King, 2009). The reintegration aspect is moving instructors into the perception of teaching with confidence and a new perspective of success. The conclusion of online university teaching during and after the COVID-19 crisis research conducted by Rapanta et al. (2020) noted in order for higher educational institutions to be competitive requires faculty preparedness and the importance instructor professional development in the areas of effective pedagogical methods with the use of online technologies. Instructors will find reintegration of teaching and learning a challenge, yet the skills learned during and after the pandemic will lead to lifelong skills. An article submitted by Kim (2020), recognized instructors who taught in synchronous and asynchronous teaching platforms during COVID-19 will yield significant benefits when these methods are layered into face-to-face instruction. COVID-19 brought a wider perception of shared understanding that the digital tools used in teaching are complements rather than substitutes for successful learning (Kim, 2020). According to Kim (2020) online instructors who were teaching prior to the pandemic and new instructors who began teaching during and post pandemic have come together to provide leadership with new ideas of delivering professional development to enhance teaching skills. The reintegration of the perception of online learning and the ability to confidently teach in the online environment will propel educational institutions to higher levels of learning for their students and enable instructors to teach with confidence.

Self-efficacy and Teacher Age in Online Education

According to Monks (2009), more than forty thousand part-time faculty are retired from other positions with an average age of sixty-two years old. Combining the research knowledge of self-efficacy and age of many adjunct faculty, professional development will need to accommodate instructors in this category. Van derKaay and Young (2012) conducted research on technology usage among community college faculty due to the interest of employment increase of older faculty and recognizing technology has progressively changed in postsecondary education. Their study indicated older faculty considered technology a minor source of stress and overall technology uses among older faculty was slightly less than younger faculty (van derKaay & Young, 2012). This research supports Bandura's (1994) research on self-efficacy of advancing age as he noted older people tend to judge changes in their intellectual capabilities largely in terms of memory performance. Overall memory performance can be better achieved in all ages by exerting a greater effort to aid in recall.

While rapid technological and social changes require adaptations causing stress which plays a factor on self-efficacy (Bandura, 1989), older aged instructors bring perspective, historical viewpoint, and good judgment to questions (Marcus, 2015). In a study related to faculty perception toward online education during the COVID-19 pandemic, Oducado and Moralist (2020) found there was a significant difference in faculty perception toward online education in terms of age with older faculty being associated with more teaching experience and higher academic rank were in favor of the move to online teaching during the pandemic. Oducado & Moralista (2020) noted their findings were in contrast to pre-pandemic studies which indicated younger instructors with less teaching experience had a stronger perception toward online education. Older faculty have been given the edge as they may have more experience and

wisdom about online pedagogy while also favoring online education in the midst of the COVID-19 pandemic desiring to remain isolated for health reasons to reduce risk and also willing to reach out for additional training to be able to remain isolated (Moralista & Oducado, 2020). Bradshaw and Johari (2003) reported in their study that older adult students had to spend more time than younger learners in order to successfully complete online tasks but did not indicate any less overall completion success. Bandura (1994) notes adults who measure their capabilities against people their own age are usually less likely to view themselves as declining in capabilities than if younger cohorts are used in comparative self-evaluation.

Technology has permitted learning institutions to expand the delivery of education to online courses and these courses have grown progressively over the last decade (van derKaay & Young, 2012). Research has identified in order for older faculty members to keep pace with new technological developments and to remain competitive and productive in the academic environment, institutions are finding they must provide effective technological assistance to the older faculty members (van derKaay & Young, 2012). Research findings by van derKaay & Young (2012) found that older faculty agreed that technology has increased their productivity and technology has an important role in education although older faculty experience a statistically significant difference in stress relating to keeping pace with their younger counterparts.

Faculty preparedness also stems from the fact approximately 70% of adjunct faculty are over the age of 40 with an average age of 50 (Yakoboski, 2018). While there is a lack of research that correlates age specifically with self-efficacy, older faculty may see a decline in self-efficacy as changes in retirement occur, possibilities of potential relocation, and even the loss of friends or spouses (Tweed, 2013). Faculty age may play a part in technology in online teaching as

Tweed (2013) continues to note a major problem in the failure of educators to adopt technologies into their pedagogical systems will be an impediment for student success and a barrier for effective teaching.

Overall, according to Marcus (2015) while some senior aged faculty may not be as effective in their role as they once were, they desire to keep working because they find their jobs fulfilling and enjoyable. As a result of the research, retired aged instructors plan to continue their roles in teaching in higher education therefore, educational institutions will need to provide adequate training to enable these instructors to be effective instructors and prepared for teaching in a crisis mode (Marcus 2015). Based on the age and online experience of adjunct faculty, educational leadership will need to gain insight on how to implement professional development to online adjunct faculty to provide them with teaching confidence. Educational leadership will also need to realize adjunct faculty have other sources of employment which restricts the time they have for professional development (Yakoboski, 2018). Implementing online teacher training will lead to a positive self- efficacy which promotes confidence in relaying course content by the online instructor.

Residential to Online Instruction During COVID-19

The emergency transition from residential teaching to online teaching during COVID-19 pandemic not only caused chaos, but also brought positive aspects in the aftermath. Regarding residential instructors, research conducted by Hebert et al. (2022) noted prior to the emergency transition of COVID-19, between 40% and 52% of faculty had not taught online and many had low online teaching efficacy. The rapid transition to online teaching combined with implementing new pedagogical skills, adapting to unfamiliar technology, and transitioning to a home environment without a planned workspace was among the greatest challenges for

residential faculty as they transition to online teaching (Hebert et al., 2022). In transitioning courses from a face-to-face-format to an online format created pedagogical challenges for residential instructors (Roy & Covelli, 2021). Typically, the process for developing an online course incorporates a period of assessment, development, and design by a course designer, but the emergency transition removed the best practice timeline of quality course development leaving instructors to be creative in their approach to teach their courses (Roy & Covelli, 2021). A study conducted by Herbert et al. (2022) found over half of the residential faculty felt uncomfortable teaching online during the emergency transition and at least 42% felt the transition was more difficult than they had anticipated.

Transitioning to the home environment proved to be a challenge as residential instructors abruptly moved to online teaching. Hebert et al. (2022) reported instructors who transitioned their teaching environment to their home were surrounded with distractions which included caring for others in the home causing increased challenges leading to reduced satisfaction with professional life. In addition, Hebert et al. (2022) indicated research which reported that over 80% of university teachers communicated that balancing work responsibilities and childcare was overwhelmingly difficult.

As residential faculty came through the emergency online teaching transition, they noted their ability to teach online was either somewhat or much improved (Hebert et al., 2022). Hebert et al. (2022) noted over 35% of faculty with no previous online teaching experience indicated their ability was much improved. In transitioning to online from residential teaching, research noted the importance of obtaining training to support a positive online teaching experience. Hebert et al. (2022) noted faculty who did not seek out mentoring or formal training reported their ability to teach online was unchanged as compared to somewhat or much improved in their

ability to teach online. Overall, previous research noted most faculty who transitioned to online teaching from residential teaching needed assistance in managing the move online with their primary needs including best online teaching practices and assistance with technology (Hebert et al., 2022).

Teaching Online Before and After COVID

Instructors who taught online prior to the COVID-19 pandemic had an easier time during the emergency transition (Hebert et al., 2022). Wilson et al. (2021) noted instructors with pre-pandemic online teaching experience were found to be significantly related to online teaching efficacy as well as online teaching readiness and comfort level teaching remotely during the pandemic. Hebert et al. (2022) reported previous research also indicated up to 70% of online faculty felt their ability to teach effectively was negatively impacted by the pandemic and the emergency remote teaching transition. While online instructors were prepared to teach online during the pandemic, it was noted by research that a majority of faculty, regardless of previous experience teaching online, implemented new teaching methods (Hebert et al., 2022).

Summary

The research conducted in this study focuses on the perception of self-efficacy and the transformational learning theory which effects higher education instructors as they experience the process of change in a crisis situation specifically the COVID-19 pandemic. This study researched potential differences in self-efficacy scores between instructors who have always taught online, instructors who taught online and residentially prior to the pandemic, and instructors who taught only residentially but were moved to online teaching due to the COVID-19 pandemic crisis. The transformative learning theory and self-efficacy supported the cognate of changes instructors incurred during the pandemic era. This research supported self-efficacy

defined as people's beliefs about their capabilities to produce designated levels of performance and a strong sense of efficacy enhances human accomplishment and personal well-being in many ways (Bandura, 1994). The transformative learning theory provided an avenue of understanding about what educational instructors experienced as they were rapidly moved to an online teaching modality from residential teaching. Instructors experienced disorientation while questioning previously held assumptions. Instructors then moved through critically assessing their abilities while reflecting on previous assumptions. After regaining a new perspective, instructors explored alternative actions, planned a new course of action, then began the process of rebuilding competence and confidence to reintegrate back into their teaching position (Eschenbacher & Fleming, 2020). Overall review of the literature reviewed indicates success in teaching after a disorienting dilemma whether it is global or personal. Positive productivity will direct instructors to professional development which will provide them with the tools needed for success both pedagogically and technologically.

The COVID-19 pandemic has brought attention to the fact that online teaching is an essential part of the future of education. Colclasure et al. (2021) noted in 2015, 30% of all U.S. college students were enrolled in at least one online course. Teacher self-efficacy is a vital aspect of productive teaching as Hebert et al. (2022) noted faculty with no prior online teaching experience were least likely to teach online in the future, whereas over half of those with a moderate amount of prior online teaching experience were more likely to teach online again. As the trend in online learning continues, preparedness will be key for faculty to obtain effective pedagogical methods to incorporate with the use of online technologies (Rapanta et al., 2020). Utilizing the theory of self-efficacy accompanied with knowledge of the transformative learning theory and the review of literature found in this research, educational leaders will understand

how they can provide their instructors with quality professional development which will meet the demands of the online educational trends and be prepared for future emergency transitions.

Chapter 3: Method

Overview

The purpose of this quantitative causal-comparative design study was to determine if there are differences in the perception of self-efficacy between groups of instructors teaching in different modalities at the onset of the COVID-19 pandemic. This chapter begins by introducing the design of the study, including full definitions of all variables. The research question and null hypothesis follow. The participants and setting, instrumentation, procedures, and data analysis are presented.

Research Design

A quantitative causal comparative design was used for this study as it is the best approach since the quantitative methodology uses a numerical approach determined from an instrument to measure differences between variables (Creswell, 2018; Leedy & Ormrod, 2018). Gall et al. (2007) identified this design as most appropriate as it compares quantitative means of a given dependent variable among groups based on the independent variable. This research compared instructor groups using a between-groups survey design to evaluate differences between three instructor groups. This research used a survey which is measurable, compared groups, and evaluated criteria (Creswell, 2015). Gall et al. (2007) identifies variables in a quantitative causal-comparative design which can be measured in terms of scores on an instrument. In similar research, Yoo (2016) utilized a survey design to investigate the effect of professional development on teacher efficacy and Ma et al. (2020) conducted a survey design on teacher self-efficacy for technology. A limitation to this research design is noted since independent variables are not manipulated in causal-comparative research designs therefore, the internal validity cannot

be assured and there is a lack of randomization of assignment of subjects to groups (Ucar et al., 2021).

This research aimed to determine whether three different instructor groups indicated differences in teacher self-efficacy scores. The dependent variable, teacher self-efficacy is defined as an educators' individual beliefs and judgement of their own capability (Tschannen-Moran & Hoy, 2001). Orakci et al. (2023) utilized the TSES as a dependent variable in a study to uncover significant differences between scores of teacher self-efficacy in regard to teacher seniority. This study contained one independent variable with three teaching modalities: instructors who taught only online, instructors who taught online and residentially prior to the pandemic, and instructors who taught only residentially, but were moved to online teaching due to the COVID-19 crisis. The instructors who only taught online are defined as higher education faculty who taught only online prior and post COVID-19. The instructor group who taught online and residentially prior to the pandemic are defined as those instructors who have taught in both teaching modalities with residential instructors being those faculty who regularly interact with students on a college campus and in an asynchronous teaching environment (Golde & Pribbenow, 1999; Richardson et al., 2016). Finally, the third group of instructors who taught only residentially but were moved to online teaching due to the COVID-19 crises are defined as instructors who played a significant role in classroom teaching and the schooling process on a college campus (Nushi et al., 2022).

Research Question and Null Hypothesis

RQ: Is there a difference in teacher self-efficacy among instructors who taught only online, instructors who taught online and residentially prior to the pandemic, and instructors who taught only residentially, but were moved to online teaching due to the COVID-19 crisis?

H_0: There is no difference in teacher self-efficacy, as measured by the Teacher Self-Efficacy Scale, among instructors who taught only online, instructors who taught online and residentially prior to the pandemic, and instructors who taught only residentially, but were moved to online teaching due to the COVID-19 crisis.

Setting and Participants

This section presents the description of the population, the participants, and the sample size of the study. This section also includes a description of the setting. Higher education instructors who taught online and those who transitioned to online from residential teaching during the COVID-19 pandemic were asked to complete an online survey.

Setting

The instructor participants in this study came from one university in Virginia in the school years of 2019 and 2022. The university is described as a private university with an enrollment of 15,800 residential and 115,00 online students (*Overview*, 2022). The participants were instructors from three teaching modalities which consisted of instructors who taught online prior to any restrictions due to the COVID-19 pandemic, instructors who taught online and residentially prior to any restrictions due to the COVID-19 pandemic and instructors who taught only residentially prior to the COVID-19 pandemic but were moved to online teaching due to restrictions of the COVID-19 pandemic.

Participants

The participants for this study were drawn from a convenience sample of instructors from a university in Virginia during the school years from 2019 to 2022. For this study, the number of participants sampled was 68. After running a G*Power, assuming a large effect size, the

minimum sample size is 66 for a one-way ANOVA with three groups with statistical power of the .05 alpha level (Faul et al., 2007). The sample consisted of respondents from three teaching modalities: instructors who have taught online prior to any restrictions due to the COVID-19 pandemic, instructors who taught online and residentially prior to any restrictions due to the COVID-19 pandemic, and instructors who taught only residentially prior to any restrictions due to the COVID-19 pandemic but were moved to online teaching due to restrictions of the COVID-19 pandemic. The sample included 11 male and 37 female instructors who taught from a strictly online teaching environment, four male and eight female instructors who taught from an online and residential environment and three male and four female instructors who taught solely residentially then forced to teach online due to COVID-19.

Instrumentation

Name of Instrument

The variables were measured by the Teacher Self-Efficacy scale (TSES) (Schwarzer et al., 1999). See Appendix B for the instrument. The purpose of this instrument was to measure the sense of teacher self-efficacy which affects the quality of the educational process (Kocabas, 2018). The TSES consists of three factors: efficacy for instruction, efficacy for classroom management, and efficacy for motivation (Schwarzer et al., 1999). As teachers gain a sense of self-efficacy in their teaching abilities, the more confident they become thus expanding their teaching abilities and use of resources. The TSES **w**as developed to ensure the quality of teaching and learning (Kocabas, 2018)**.** According to Tschannen-Moran & Hoy (2001), the items were constructed following Bandura's social cognitive theory. There are four major areas in which teachers may hold different self-efficacy expectations which include job accomplishment, skill development on the job, social interaction with students, parents, and colleagues, and

coping with job stress (Schwarzer et al., 1999). Schwarzer et al. (1999) concluded the four major areas appeared to be of vital importance for successful teaching. The instrument has been used in numerous peer-reviewed studies (Barni et al., 2019; De Smul et al., 2018; and Yoon et al., 2012). Additionally, similar research conducted by Stegall (2011) utilized the (TSES) in a survey design to provide a relationship in professional learning communities and teacher self-efficacy. The TSES has been used to gain a better understanding of issues that create difficulties for instructors as they teach their students.

The construct validity of the TSES was carefully developed through item development, item selection, and factor analysis-revision cycles using teachers to generate and critique items within the scale (Heneman et al., 2006). Heneman et al. (2006) also reported from research that the TSES was related to the independent measure of teacher performance within the context of the performance of the teacher role as noted by Tschannen-Moran and Hoy (2001). The reliability statistics were noted by Mookkiah & Prabhu (2019) which stated the reliability and validity indicate Cronbach's alpha between .76 and .82 with the test-retest reliability .67 (N=158) and .76 (N=193) over one year. For the period of two years, the test-retest reliability for the TSES was found to be .65 (N = 161) (Schwarzer et al., 1999). The TSES instrument consisted of 24 questions. The scales of measurement of the TSES are a Likert type 9-point rating scale with 1 meaning nothing and 9 meaning a great deal. The highest score indicates the existence of high self-efficacy in teachers (Mookkiah & Prabhu, 2019). The scoring procedure were determined by the combined possible score on the TSES. A score of 1 is the lowest possible score revealing low teacher self-efficacy and a score of 9 reveals strong teacher self-efficacy.

The instrument was administered by disseminating the survey through email to the online instructors with an expectation of approximately three to five minutes to complete. The

researcher scored the instrument by evaluating the numerical comparisons of the chosen numbers of the submitted surveys. The instrument can be obtained free on the Ralf Schwarzer website (*Teacher Self-Efficacy Scale*). Links are readily available online to provide access to the instrument as well as information on its development (Stem Learning and Research Center). See Appendix B for permission to use the instrument.

Procedures

The procedures began with the submission of the research to the Institutional Review Board (IRB), see Appendix D for IRB approval. A multi-step process included (a) requested entry into the college and identification of participants; (b) instrumentation; (c) questionnaire administration; and (d) data analysis (Gall et al., 2007). A written request was sent to the college with a description of the research, the purpose for the research, the sampling method, the Likert scale questionnaire, and the approximate length of time to complete the survey. The survey was sent to currently employed online adjunct and residential faculty utilizing their institution email. The faculty was informed of the goals of the study and asked to participate in the survey related to teacher self-efficacy. If the faculty agreed to participate in the study, they were asked to complete an anonymous survey with minimal risks, will not expect to receive a direct benefit from taking part in this study, and would not be compensated for participating in this study. The faculty were notified that the records of this study will be kept private and any report which might be published will not include any information that would make it possible to identify a subject. See Appendix A for participant consent form. The survey was emailed to the online adjunct faculty with a two-week time frame to complete the survey. Two reminder notices were sent at the end of week one and in the middle of week two. To ensure data was secure, no identifying information was collected from the participants such as names or email addresses.

The survey responses were stored as an electronic file in a password-protected folder in a password-protected computer. Also, three years after the study is completed, the data will be deleted from the computer.

Data Analysis Plan

To address the research question, a one-way Analysis of Variance (ANOVA) was conducted. A one-way ANOVA is conducted when there is a categorical independent variable with three groups, and a continuous dependent variable (Field, 2018; Warner, 2013). According to Laerd Statistics (n.d.), six assumptions should be reviewed: the dependent variable is measured via a continuous scale, the independent variables have three or more independent groups with different participants, there should be no significant outliers, the dependent variable should be normally distributed, and there should be a homogeneity of variance. In this research, the dependent variable, the TSES, allows for a continuous response option to questions with assumed equal distances between options (Creswell, 2015). The independent variable is in three groups of different participants; instructors who taught only online, instructors who taught online and residentially prior to the pandemic, and instructors who taught only residentially, but were moved to online teaching due to the COVID-19 crisis. Assumption of no significant outliers were tested using the box-and-whiskers plot. The assumption of normal distribution for each independent variable group was tested using the Shapiro-Wilk test for normality. According to Warner (2013) if the *p* value of the Shapiro-Wilk test is .05 or higher, there is no violation in the assumption of normality. Additionally, the assumption of the homogeneity of variances was tested using Levene's test of equality of variances (Michelle Barthlow et al., n.d.). If there is a violation in the assumption of normality due to non-normal distributions or extreme outliers, the

central limit theorem states that the distribution of sample means is normally distributed when the sample size is relatively large (30 or above) (Field, 2018; Pallant, 2020).

The one-way ANOVA calculates the F ratio within subject variance over the between subject variance (Warner, 2013). If the *p* value is less than .05, there is a statistically significant difference between at least two of the groups referred to as the omni-bus test (Warner, 2013). After a significant omni-bus test, a post-hoc test was computed to determine which of the three groups were significantly different from one another (Warner, 2013). Also, the eta squared effect size measure is computed to evaluate the magnitude of the difference between the groups that are statistically significantly different (Gall et al., 2007). A power analysis for the one-way ANOVA was calculated using an error rate of .05, a large effect size using eta squared analysis (f = .25), three groups, and a power of .80. A power of .80 is a standard power for statistical tests which identifies 80% of detecting a significant effect if one exists in the real world (Field, 2018; Tabachnik & Fidell, 2018). In addition, the research was analyzed using GPower (1996). GPower is an interactive, menu-driven program which performs statistical power analyses for common statistical tests which compute power values for given sample sizes (Erdfelder et al., 1996). The program may be used to display graphically the relation between any two of the relevant variables, and it offers the opportunity to compute the effect size measures from basic parameters defining the alternative hypothesis (Erdfelder et al., 1996).

Summary

The method designed for this quantitative causal-comparative design study was the best approach to provide numerical data to determine differences between variables. Since the COVID-19 pandemic significantly interrupted the normal operations of educational institutions forcing colleges to move their courses online, research was needed to identify teacher self-

efficacy (Nworie, 2021). The procedures outlined in this chapter delivered data unique to this study and provided valuable information on how to navigate future crisis situations that disrupt the delivery of educational courses.

Chapter 4: Results

Overview

For the purpose of this study, a quantitative causal-comparative design was used to investigate differences in the perception of self-efficacy between groups of instructors teaching in different modalities since the beginning of the COVID-19 pandemic restrictions. This research used a survey to compare groups and evaluate the criteria. A one-way ANOVA was conducted to address the research question through data analysis. This experimental design study sought to determine if there were statistically significant differences among instructors who taught solely online, instructors who taught in a mixed modality of online and residential courses, and instructors who were thrust into online teaching from a strictly residential teaching environment.

Research Question and Null Hypothesis

RQ: Is there a difference in teacher self-efficacy among instructors who taught only online, instructors who taught online and residentially prior to the pandemic, and instructors who taught only residentially, but were moved to online teaching due to the COVID-19 crisis?

H_0: There is no significant difference in teacher self-efficacy, as measured by the Teacher Self-Efficacy Scale, among instructors who taught only online, instructors who taught online and residentially prior to the pandemic, and instructors who taught only residentially, but were moved to online teaching due to the COVID-19 crisis.

Descriptive Statistics

Descriptive statistics were obtained on the dependent variable (teacher self-efficacy) for each teaching group. The sample consisted of 68 instructors who taught at an institution of higher education in Virginia. While the sample is lower than the minimum sample size, a GPower was run assuming a large effect size which allowed for a minimum sample size of 66.

Table 1 displays the means and standard deviation based on the scores of the TSES and the three teaching modalities: taught online only, taught online and residentially, and those residential instructors who were forced to teach online. While the three groups show a wide disparity in sample size, there were no violations in assumption testing and this study contained a low sample size variation ranging from 3.49 to 8.42 which supports the robustness of the *F*-test (Blanca et al., 2017).

Table 1

Descriptive Statistics

Dependent Variable: TSES

Group	*n*	*M*	*SD*
1 – Online only	47	6.16	1.01
2 – Online & Residential	18	6.51	1.06
3 – Residential forced to online	3	5.27	1.26

Results

Hypothesis

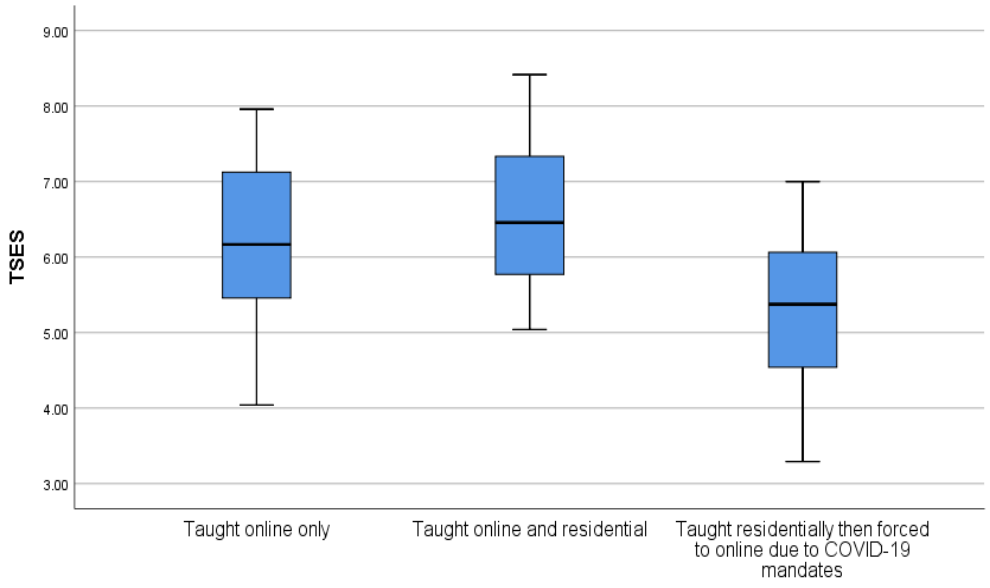
H_0: There is no significant difference in teacher self-efficacy, as measured by the Teacher Self-Efficacy Scale, among instructors who taught only online, instructors who taught online and residentially prior to the pandemic, and instructors who taught only residentially but were moved to online teaching due to the COVID-19 crisis.

Data Screening

Data screening was conducted on each group's dependent variable. The researcher scanned for data entry errors and inconsistencies. No data errors or inconsistencies were identified. However, there were a total of 89 respondents who started the survey, and 21 respondents did not finish the survey, thus they were not included in the analyses. This left a total of 68 usable responses. After the respondents with incomplete data were removed, composite mean scores were computed for all respondents using the 24 questions of the Teacher Self-Efficacy scale. Cronbach's alpha reliability analysis was conducted to evaluate the internal consistency of the Teacher Self-Efficacy Scale. Cronbach's alpha coefficients of .80 or higher indicated acceptable internal consistency among the instrument item scores while the test results produced an alpha coefficient of .95, which exceeds the .80 standard of acceptable reliability (Field, 2018; Nunally, 1978; Pallant, 2020).

Figure 1

Box and Whisker Plots



Assumptions

An Analysis of Variance (ANOVA) was used to test the null hypothesis. The ANOVA requires that the assumptions of normality and the homogeneity of variance are met. Normality was examined using a Shapiro-Wilk test. Shapiro-Wilk was used because the sample size was more than 50. No violations of normality were found. See Table 2 for Tests of Normality.

Table 2

Tests of Normality

	Shapiro-Wilk		
Groups	Statistic	*df*	Sig.
Taught online only	.970	49	.245
Taught online and residential	.953	12	.687
Taught residentially, then forced to teach online due to COVID-19 mandates	.991	7	.995

Assumption of Homogeneity of Variance

The assumption of homogeneity of variance was examined using Levene's test. No violation was found where $p = .861$. The assumption of homogeneity of variance was met. See Table 3.

Table 3

Test of Homogeneity of Variance

Levene's Test				
	Statistic	*df1*	*df2*	Sig.
Based on Mean	.150	2	65	.861

Results for the Null Hypothesis

An ANOVA was used to test the null hypothesis to determine if there was a significant difference among instructors who taught only online, instructors who taught online and residentially prior to the pandemic, and instructors who taught only residentially but were moved to online teaching due to the COVID 19 crises. The results of the one-way ANOVA indicated that there was a statistically significant difference among the three teaching modalities. The null hypothesis was rejected at the 95% confidence level $F(2, 68) = 3.20$, $p = .047$, $\eta^2 = .09$ where the eta square effect size value was .09. Because the null was rejected, post hoc analysis was conducted using a Tukey test to compare all possible pairs of group means. Based on the results of the Tukey test, teacher self-efficacy scores were significantly higher for the taught online and residential modality ($M = 6.51$, $SD = 1.06$) than the taught residentially then forced to teach online due to COVID-19 ($M = 5.27$, $SD = 1.26$). There was no significant difference between the taught online only group ($M = 6.16$, $SD = 1.01$) and the taught residentially then forced to teach online due to COVID-19. See Table 4 for Multiple Comparisons of Groups.

Table 4

Multiple Comparisons of Groups

Pairwise Comparisons

Dependent Variable: TSES

(I) group	(J) group	Mean Difference (I-J)	*SE*	Sig.[b]	95% Confidence Interval for Difference	
					Lower Bound	Upper Bound
1	2	-.35402	.33725	.549	-1.1629	.4549
	3	.89201	.42308	.096	-.1228	1.9068
2	1	.35402	.33725	.549	-.4549	1.1629
	3	1.24603*	.49798	.039	.0516	2.4405
3	1	-89201	4.238	.096	-1.9068	.1228
	2	-1.24603*	.49798	.039	-2.4405	-.0516

Based on estimated marginal means

*. The mean difference is significant at the .05 level.

b. Adjustment for multiple comparisons: Least Significant Difference (equivalent to no adjustments).

Summary

This quantitative causal comparative design study aimed to determine if there were statistically significant differences among instructors who taught solely online, instructors who taught in a mixed modality of online and residential, and instructors who were thrust into online teaching from a strictly residential teaching environment. The research question under investigation was: Is there a difference in teacher self-efficacy among instructors who taught

only online, instructors who taught online and residentially prior to the pandemic, and instructors who taught only residentially but were moved to online teaching due to COVID-19 crises? A one-way ANOVA was conducted to address the research question. The results of the one-way ANOVA indicated that there was a statistically significant difference among the three teaching modalities.

Chapter 5: Discussion

Overview

This study sought to provide empirical data that could assist leadership in future educational emergency transitions. This chapter presents a discussion which reviews previous studies correlating with the analysis of this research. Implications are addressed on how this study adds to the existing body of knowledge to help improve future exchanges from various types of teaching modalities. Limitations of this study are addressed to note potential weaknesses and threats to the validity of the research. Finally, recommendations for further research are discussed.

Discussion

This research focused on the null hypothesis: There is no difference in teacher self-efficacy, as measured by the Teacher Self-Efficacy Scale, among instructors who taught only online, instructors who taught online and residentially prior to the pandemic, and instructors who taught only residentially, but were moved to online teaching due to the COVID-19 crisis. This study found teacher self-efficacy scores were significantly higher for the taught online and residentially modality ($M = 6.51$, $SD = 1.06$) than the taught residentially then forced to teach online due to COVID-19 ($M = 5.27$, $SD = 1.26$). Therefore, the null hypotheses was rejected $F(2, 68) = 3.20$, $p = .047$. Faculty (n=68) from an institution of higher education in Virginia who taught from both online and residential teaching environments covering the time period from 2019 to 2022 in which COVID-19 began its appearance and until faculty were able to return to campus were asked to complete the Teacher Self-Efficacy Scale (TSES). The researcher analyzed the data from the survey to determine if various teaching modalities had a significant

difference on teacher self-efficacy. The data were analyzed using the one-way ANOVA which revealed there was a significant difference among the three teaching modalities. A post-hoc comparison test was conducted to determine which teaching modalities differed in teacher self-efficacy scores. Based on the results of the post-hoc test with the Bonferroni adjustment, the results indicated that teacher self-efficacy scores were significantly higher for the taught online and residentially prior to the pandemic modality than the taught residentially then forced to teach online due to COVID-19. The results of this study were compatible with current research.

Teaching Online Before and After COVID

Faculty who were teaching online prior to and during COVID-19 indicated no significance in self-efficacy as compared to instructors who taught online and residentially prior to the pandemic and instructors who taught only residentially, but were moved to online teaching due to the COVID-19 crisis. Hebert et al., (2022) indicated faculty felt their ability to teach effectively was negatively impacted by the pandemic. Since the cognitive processes of self-efficacy involve people's beliefs as their efficacy shapes the type of anticipatory scenarios, the online only instructors were able to better visualize the teaching scenario and prepare for potential issues involving the pandemic (Bandura, 1994). Previous studies also noted university teachers with prior experience in online teaching reported more motivation to teach and maintained a medium to higher teacher self-efficacy score. (Ma et al., 2020).

The transformative learning theory which provides an understanding of critical steps in the reasoning process adults may experience as they wrestle with change indicated neutrality for online only instructors in this study. While online only instructors experienced the global pandemic, they were able to maintain confidence in their teaching abilities as studies have noted

instructors with previous online teaching experience had a smoother transition as their universities handled the pandemic crisis (Colclasure et al., 2021; Manokore & Kuntz, 2022).

Teaching Online and Residentially Prior to COVID-19

This research indicated instructors who taught online and residentially prior to COVID-19 had the highest self-efficacy score of the three groups. Since perceived self-efficacy focuses on the attribute which assists instructors in understanding beliefs about their capabilities, the instructors who had been teaching online and residentially demonstrated a smooth transition of their residential courses to an online environment as shown by their higher self-efficacy scores. (Bandura, 1994). Bandura (1977) also noted individuals with higher self-efficacy experience fewer negative emotions in the process of achieving goals. Ma et al., (2020) confirmed higher self-efficacy in the residential instructors who were previously teaching online in his research as he noted more experience in online teaching tends to increase teacher self-efficacy for online instructions.

The transformative learning theory aligns with the instructors who were teaching online and residentially then moved to online teaching only as they experienced the crisis which created the disorienting dilemma and had the opportunity to step back and create a perspective transformation on how to teach efficiently (Tomczyk & Walker, 2021). Current research noted planning and adaptability were the areas that aided instructors to have a high self-efficacy score as they did not only think of the personal difficulties, but also serving their students to make sure they had the best educational experience (Marek et al., 2021). As transformative learning includes planning a course of action with goals and instructor competence, Marek et al., (2021) presented a study of experiences of higher education faculty who converted classes to online learning during COVID-19. In his study Marek et al., (2021) noted while there was high

variability between instructors, there was a positive overall faculty experience in regard to planning and adaptability which lends to high self-efficacy.

A study conducted by Buchwald (2023) in relationship to the aspect of instructor new roles after a crisis in the transformative learning theory noted a feeling of optimism in instructors who had previous online experience. The feeling of optimism is also related to high self-efficacy as the instructors identified with a consistency to push through obstacles as they successfully transitioned from residential to online teaching (Buchwald, 2023). Previous research conducted by De Klerk and Smith (2021) has supported transformative leadership as it should be geared towards innovation of learning delivery methods as well as the instructor's ability to act autonomously as instructors teach online courses from a residential course base to aid in continued high teacher self-efficacy.

Teaching Only Residentially Forced to Online Due COVID-19

This research indicated significance in lower teacher self-efficacy for the teaching only residentially then forced to online due to COVID-19 group. A study conducted by Ma et al. (2021) found instructors without online teaching experience reported a lower self-efficacy as they transitioned to online teaching. Prior to the pandemic, these faculty had not taught online; therefore, they were unsure of how to achieve student satisfaction. Teaching methods that may have worked well in the classroom may not have been effective in the online teaching environment, therefore causing frustration which leads to a feeling of incompetence producing a lower self-efficacy (Wilson et al., 2021). Practical factors that played a role in lower self-efficacy for faculty who were forced to online teaching without prior online teaching experience were items such as inadequate bandwidth and poor network connectivity, unsuitable home environment for attending classes online, a feeling of isolation, demotivation due to the lack of in

class interaction, and excessive screen time causing fatigue (Rizvi & Nabi, 2021). In a study conducted by DeCoito and Estaiteyeh, (2022) findings noted 42% of instructors expressed frustration in navigating technological issues while 24% reported concerns with lack of leadership and administrative directions leading to low self-efficacy.

According to the transformative learning theory, the new experience which is encountered is either rejected or must be transformed to assimilate a new frame of reference (Mezirow, 1997). In the exploration of options within the transformative learning theory, individuals explore the options after the realization of the discontentedness of the disorienting dilemma. COVID-19 brought choices to instructors as to whether they would make the transition to teaching online or choose to leave their employment. In a study conducted by Gillani et al., (2022) older faculty reported an increased intention to leave their profession compared to before the pandemic as compared to their younger counterparts. The self-examination aspect of the transformative learning theory played a large role for some instructors. In a study conducted by Buchwald (2023), the findings reported a lack of structure and preparation resulted in decreased productivity thus leading to an overbearing sense of discouragement and burnout which affected their perspective on teaching and of themselves. Mezirow (1978) identifies success as building competence which involves developing a strong sense of self-efficacy to produce levels of performance which exercise influence over events that affect our lives. For residential faculty forced to move to an online teaching environment, the stresses and duress experienced not only in their personal lives but in the added frustrations of an emergency mandated move to a different learning system may have also impacted their teaching experience (Buchwald, 2023).

Overall, the results of this study were consistent with previous research on instructors in various teaching environments and teacher self-efficacy. This study added to the body of

literature by demonstrating the impact of teacher self-efficacy during a crisis. Leadership in higher education can utilize the data revealed in this research to help understand what their faculty may need to be successful in diverse teaching modalities.

Implications

The present study has added valuable information to the existing body of knowledge regarding faculty teaching modalities and their implication on teacher self-efficacy. The knowledge gained from this study can help educational leadership prepare their faculty for unexpected change and immediate disruption due to a crisis. Whether the crisis is global or a smaller geographical area, educators should be prepared for disruption. Students look to the leadership of higher education facilities to meet their academic goals designed for their course of study regardless of crisis circumstances. Through transformative learning, COVID-19 allowed educators to experience a crisis, examine their abilities to teach through a global crisis, recognize shared experiences, explore new options as needed, determine a course of action, build confidence, and develop a new perspective for a new or different teaching environment.

Furthermore, this research revealed a significant difference in teacher self-efficacy scores between instructors who taught online and residentially and faculty who taught residentially then were forced to online teaching. The faculty who taught residentially then forced to online teaching had a significant lower teacher self-efficacy which could have been caused by anticipated difficulties with technology, losing connections with students and colleagues, time consuming features of an unfamiliar online learning management system, spending extra time getting acquainted with a new teaching environment, and locating virtual resources.

Higher education leadership should recognize the value and potential diversity of their faculty and be willing to provide needed training for all teaching modalities, so faculty can feel

they are able to successfully employ quality pedagogical knowledge with confidence. While crisis situations are not planned, preparation is the key to transition to various teaching environments using all faculty available. This study has shown significance in teacher self-efficacy during a crisis; therefore, leadership will benefit from training faculty in preparation for crisis situations.

Limitations

The researcher has identified limitations with this study. This study was conducted approximately two years after COVID-19 affected the university, therefore participants may not have responded to the survey as intensely as they might have had the survey been distributed closer to the COVID-19 timeline. The timeline of COVID-19 affecting the university noted the university mandated all residential classes would go to an online format beginning March 23, 2020 (Wood, 2020) until September 10, 2020 which marked the date for students to return to campus for classes (Svrluga, 2021). Students then had the option to return to campus to finish the fall semester virtually or finish off-campus (Helfenbein, 2020). Beginning with the spring semester, January 2021, all residential students were welcomed back to campus (Helfenbein, 2021). The survey results may not accurately reflect the true dynamics of the participants reflection of the teacher self-efficacy scale due to the time lapse of this study and the actual perspectives of faculty forced to an online teaching environment.

Another limitation of this study is the small size of respondents in each teaching modality, particularly the very small size of instructors who taught residentially and were forced to online teaching. Equality and a greater number of respondents in each teaching modality would be desired. Unequal samples sizes affect the robustness of the equal variance assumption thus leading to potential bias in the data (Gall et al., 2007).

Moreover, the TSES allowed for a Likert type 9-point rating scale with 1 meaning nothing and 9 meaning a great deal. The span of choosing a number 1-9 might not have been narrow enough for the survey participant to be specific in their choice of teacher self-efficacy. The study might have been more effective using a teacher self-efficacy scale with a decreased numerical scale.

Finally, the survey distribution could have been more versatile within the university to include more departments with a higher number of faculty who transitioned to online teaching for COVID-19. While the researcher utilized a university of convenience, a broader solicitation for the survey distribution might have increased the data numbers. Additionally, the researcher might have included a gift for completing the survey. Survey completion was a concern as 21 respondents started the survey but did not complete it.

Recommendations for Further Research

1. Future studies related to this research topic could focus more on faculty who were forced to teach online from a fully residential teaching modality to increase knowledge of teacher self-efficacy as educational trends change.
2. This study should be repeated to gain a larger sample size, especially in the faculty group forced to online teaching during a crisis.
3. This study should be repeated to include a more online focused teacher self-efficacy scale.
4. This study should be repeated to include a wider range of colleges across the United States.
5. Additionally, a recommendation for further research would be to measure the adaptability of instructors utilizing a modified version of the Adaptability Scale.

Conclusion

In conclusion, the data presented in this study identified the significance in teacher self-efficacy based on various teaching modalities. The two theories used in this study, transformative learning and self-efficacy, supported the outcome of this study making this research plausible and dependable. The results were consistent with previous data and can be used to help leadership provide guidance for instructors as they navigate future crises as it is related to academic instruction in various teaching modalities.

Summary

The current body of literature provided evidence that teacher self-efficacy had an effect on instructors as they navigated teaching transitions due to COVID-19 (Colclasure et al., 2021). According to Morris et al. (2016), teacher self-efficacy is a strong indicator of teacher achievement of specific tasks and has been one of the most researched constructs in teacher education. COVID-19 forced higher education to prioritize and change of delivery of academia for a period of time thus promoting future strategic long-term change to accommodate students. As higher education recovers from emergency teaching transitions due to COVID-19, university leadership will benefit from continued research in understanding the impact of teacher self-efficacy.

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Appendix A

Instrument Permission

ANITA WOOLFOLK HOY, PH.D.

PROFESSOR
PSYCHOLOGICAL STUDIES IN EDUCATION

Dear

You have my permission to use the *Teachers' Sense of Efficacy Scale* in your research. A copy the scoring instructions can be found at:

http://u.osu.edu/hoy.17/research/instruments/

Best wishes in your work,

Anita Woolfolk Hoy

Anita Woolfolk Hoy, Ph.D.
Professor Emeritus

Also, the self-efficacy instrument is offered for free on Ralf Schwarzer's website (Schwarzer et al., 1999, *Teacher Self-Efficacy Scale*).

Appendix B

Teachers' Sense of Efficacy Teaching Scale

Directions: This questionnaire is designed to help us gain a better understanding of the kinds of things that create difficulties for instructors in their course activities. Please indicate your opinion about each of the statements below. Your answers are confidential.

1) What is your age?

    a. 20-30
    b. 31-40
    c. 41-50
    d. 51-60
    e. 61-70
    f. 71-80

2) What is your ethnicity?

    a. African American
    b. Asian American
    c. Hispanic
    d. Native American
    e. White
    f. Other (enter your ethnicity)
    g. Prefer not to answer

3) With what gender do you identify?

    a. male
    b. female
    c. non-binary
    d. prefer not to answer

4) Have you ever been an online student yourself?

    a. Yes
    b. No

5) What is your teaching position?
    a) Online only
    b) Online and residential
    c) Residential only

6) Did you teach graduate, undergraduate, or both from 2019 to 2022 during the COVID-19 period?
    a) Undergraduate
    b) Graduate
    c) Both

7) What department did you work in at your college or university from 2019 to 2022 during the COVID-19 period?
    a) Aeronautics
    b) Applied Studies & Academic Success
    c) Arts & Sciences
    d) Behavioral Sciences
    e) Business
    f) Communication and the Arts
    g) Divinity
    h) Education
    i) Engineering
    j) General Education
    k) Government
    l) Health Sciences
    m) Law
    n) Medicine
    o) Music
    p) Nursing

8) Did you teach online or residential to online during the COVID-19 pandemic transition?
    a) Yes
    b) No

9) What was your teaching position from 2019 to 2022 during the COVID-19 period?

    a. Taught online only
    b. Taught online and residential
    c. Taught residentially then forced to online due to COVID-19 mandates

10) How many years have you been teaching in higher education (including face-to-face, online, and blended courses?

    a. 1-5 years
    b. 6-10 years
    c. 11-15 years
    d. 16-20 years
    e. more than 20 years

11) If you have taught online, how many years have you been teaching online courses?

    a. 1-5 years
    b. 6-10 years
    c. 11-15 years
    d. 16-20 years
    e. more than 20 years

12) How much can you do to get through to the most difficult students?

Nothing Very Little Some Influence Quite a Bit A Great Deal
1 2 3 4 5 6 7 8 9

10. How much can you do to help your students think critically in an online class?

Nothing Very Little Some Influence Quite a Bit A Great Deal
1 2 3 4 5 6 7 8 9

11. How much can you do to control disruptive behavior in an online environment?

Nothing Very Little Some Influence Quite a Bit A Great Deal
1 2 3 4 5 6 7 8 9

12. How much can you do to motivate students who show low interest in assignments?

Nothing Very Little Some Influence Quite a Bit A Great Deal
1 2 3 4 5 6 7 8 9

13. To what extent can you make your expectations clear about student behavior?

Nothing Very Little Some Influence Quite a Bit A Great Deal
1 2 3 4 5 6 7 8 9

14. How much can you do to get students to believe they can do well on their assignments?

Nothing Very Little Some Influence Quite a Bit A Great Deal
1 2 3 4 5 6 7 8 9

15. How well can you respond to difficult questions from your students?

Nothing Very Little Some Influence Quite a Bit A Great Deal
1 2 3 4 5 6 7 8 9

16. How well can you establish routines to keep activities running smoothly?

Nothing Very Little Some Influence Quite a Bit A Great Deal
1 2 3 4 5 6 7 8 9

17. How much can you do to help your students value learning?

Nothing Very Little Some Influence Quite a Bit A Great Deal
1 2 3 4 5 6 7 8 9

18. How much can you gauge student comprehension of what you have taught?

Nothing Very Little Some Influence Quite a Bit A Great Deal
1 2 3 4 5 6 7 8 9

19. To what extent can you craft good questions for your students?

Nothing Very Little Some Influence Quite a Bit A Great Deal
1 2 3 4 5 6 7 8 9

20. How much can you do to foster student creativity?

Nothing Very Little Some Influence Quite a Bit A Great Deal

1 2 3 4 5 6 7 8 9

21. How much can you do to get students to follow course guidelines?
Nothing Very Little Some Influence Quite a Bit A Great Deal
1 2 3 4 5 6 7 8 9

22. How much can you do to improve the understanding of a student who is failing?
Nothing Very Little Some Influence Quite a Bit A Great Deal
1 2 3 4 5 6 7 8 9

23. How much can you do to calm a student who is discontented?
Nothing Very Little Some Influence Quite a Bit A Great Deal
1 2 3 4 5 6 7 8 9

24. How well can you establish a classroom management system with each course of students?
Nothing Very Little Some Influence Quite a Bit A Great Deal
1 2 3 4 5 6 7 8 9

25. How much can you do to adjust your lessons to the proper level for individual students?
Nothing Very Little Some Influence Quite a Bit A Great Deal
1 2 3 4 5 6 7 8 9

26. How much can you use a variety of assessment strategies?
Nothing Very Little Some Influence Quite a Bit A Great Deal
1 2 3 4 5 6 7 8 9

27. How well can you keep a few problem students from ruining an entire discussion?
Nothing Very Little Some Influence Quite a Bit A Great Deal
1 2 3 4 5 6 7 8 9

28. To what extent can you provide an alternative explanation or example when students are confused?
Nothing Very Little Some Influence Quite a Bit A Great Deal
1 2 3 4 5 6 7 8 9

29. How well can you respond to defiant students?
Nothing Very Little Some Influence Quite a Bit A Great Deal
1 2 3 4 5 6 7 8 9

30. How much can you assist in helping students do well in school?
Nothing Very Little Some Influence Quite a Bit A Great Deal
1 2 3 4 5 6 7 8 9

31. How well can you implement alternative strategies in your course?
Nothing Very Little Some Influence Quite a Bit A Great Deal
1 2 3 4 5 6 7 8 9

32. How well can you provide appropriate challenges for very capable students?

Nothing		Very Little		Some Influence		Quite a Bit		A Great Deal
1	2	3	4	5	6	7	8	9

Appendix C

Consent

Title of the Project: THE EFFECTS OF THE COVID-19 PANDEMIC ON TEACHER SELF-EFFICACY AMONG ONLINE FACULTY AND RESIDENTIAL FACULTY TRANSITIONED TO ONLINE TEACHING: A CAUSAL-COMPARATIVE STUDY
Principal Investigator: Sheryl Welfel, Doctoral Candidate, School of Education, Liberty University

Invitation to be Part of a Research Study

You are invited to participate in a research study. To participate, you must have taught online or residentially for Liberty University from 2019 to 2022. Taking part in this research project is voluntary.

Please take time to read this entire form and ask questions before deciding whether to take part in this research.

What is the study about and why is it being done?

The purpose of the study research is to determine if there are differences in the perception of self-efficacy between groups of instructors who have been impacted by the COVID-19 pandemic.

What will happen if you take part in this study?

If you agree to be in this study, I will ask you to do the following:

1. Participate in the online survey that will take approximately 3-5 minutes.

How could you or others benefit from this study?

Participants should not expect to receive a direct benefit from taking part in this study.

Benefits to society include higher quality online teaching experiences for instructors and learning experiences students.

What risks might you experience from being in this study?

The expected risks from participating in this study are minimal, which means they are equal to the risks you would encounter in everyday life.

How will personal information be protected?

The records of this study will be kept private. Research records will be stored securely, and only the researcher will have access to the records. Participant responses to the online survey will be anonymous. Data will be stored on a password-locked computer. After three years, all electronic records will be deleted.

Is study participation voluntary?

Participation in this study is voluntary. Your decision whether to participate will not affect your current or future relations with Liberty University. If you decide to participate, you are free to not answer any question or withdraw at any time prior to submitting the survey.

What should you do if you decide to withdraw from the study?

If you choose to withdraw from the study, please exit the survey and close your internet browser. Your responses will not be recorded or included in the study.

Whom do you contact if you have questions or concerns about the study?

The researcher conducting this study is Sheryl Welfel. You may ask any questions you have now. If you have questions later, **you are encouraged** to contact her at swelfel@liberty.edu.

Whom do you contact if you have questions about your rights as a research participant?

If you have any questions or concerns regarding this study and would like to talk to someone other than the researcher, **you are encouraged** to contact the IRB. Our physical address is Institutional Review Board, 1971 University Blvd., Green Hall Ste. 2845, Lynchburg, VA, 24515; our phone number is 434-592-5530, and our email address is irb@liberty.edu.

Disclaimer: The Institutional Review Board (IRB) is tasked with ensuring that human subjects research will be conducted in an ethical manner as defined and required by federal regulations. The topics covered and viewpoints expressed or alluded to by student and faculty researchers are those of the researchers and do not necessarily reflect the official policies or positions of Liberty University.

Your Consent

Before agreeing to be part of the research, please be sure that you understand what the study is about. You can print a copy of the document for your records. If you have any questions about the study later, you can contact the researcher using the information provided above.

Appendix D

Recruitment Letter

Dear Recipient,

As a graduate student in the School of Education at Liberty University, I am conducting research as part of the requirements for my doctoral degree. The purpose of my research is to determine if there are differences in the perception of self-efficacy between groups of instructors who have been impacted by the COVID-19 pandemic, and I am writing to invite you to join my study.

Participants must have taught online or residentially for Liberty University from 2019 to 2022. Participants will be asked to take an anonymous, online survey. It should take approximately 3-5 minutes to complete the procedure listed. Participation will be completely anonymous, and no personal, identifying information will be collected.

To participate, please click here to conduct the online survey.

A consent document is provided as the first page of the survey. The consent document contains additional information about my research.

After you have read the consent form, please click the "here" link above to proceed to the survey. Doing so will indicate that you have read the consent information and would like to take part in the study.

Sincerely,

Sheryl Welfel
Doctoral Candidate
[redacted]

Appendix E

Institutional Review Board Approval

IRB #: IRB-FY22-23-1367

Title: THE EFFECTS OF THE COVID-19 PANDEMIC ON TEACHER SELF-EFFICACY AMONG ONLINE FACULTY AND RESIDENTIAL FACULTY TRANSITIONED TO ONLINE TEACHING: A CAUSAL-COMPARATIVE STUDY

Creation Date: 4-8-2023

Status: Approved

Principal Investigator: Sherrie Welfel

Review Board: Research Ethics Office

Study History Submission Type Initial

Review Type Exempt

Decision Exempt

Key Study Contacts:

Member: Angela Ford Role: Co-Principal Investigator - Contact: [redacted]

Member: Sherrie Welfel Role: Principal Investigator - Contact: [redacted]

Member: Sherrie Welfel Role: Primary Contact - Contact: [redacted]